



Final

Site Inspection Report

Former Storage Areas

ST-16A and 16B

**FORMER MARINE CORPS AIR STATION,
TUSTIN, CALIFORNIA**

September 2003

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ORIGINAL

EXECUTIVE SUMMARY

This site inspection (SI) report summarizes the results of previous investigations conducted by OHM Remediation Services Corporation (OHM) at former Storage Areas (ST) 16A and 16B (ST-16A/B) at Former Marine Corps Air Station (MCAS) Tustin, Orange County, California. This SI report also estimates the human and environmental exposure to hazardous substances by performing a preliminary screening risk evaluation based on results of previous investigations. This SI report is prepared in accordance with the Environmental Protection Agency (EPA) guidance document for performing SI reports under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and follows relevant regulations specified in the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) Sections 300.410 and 300.420(c) (55 Federal Register [FR] 8845).

Former MCAS Tustin is located within central Orange County in southern California, approximately 1 mile southeast of Santa Ana and 9 miles north of Laguna Beach. Storage Area ST-16A/B is located north of building 186 in the motor pool area adjacent to the asphalt parking area. The motor pool area was used for the storage and maintenance of heavy equipment including cranes, dozers, loaders, dump trucks, JP-5 tanker trucks, and generators. Storage area ST-16A (building 590) was a temporary hazardous waste storage unit consisting of a 17-foot by 18-foot concrete pad with a sump, within a 6-inch containment berm. Area ST-16B is located 15 feet to 20 feet west of ST-16A. ST-16B was a former storage unit that contained two paint lockers and was constructed with a plastic tarp and a sandbag containment berm.

Storage area, ST-16A was originally investigated in November 1996 under the Resource Conservation and Recovery Act (RCRA) Program. As part of this RCRA program investigation, a total of 8 soil samples were collected. Six of the eight soil samples were analyzed for total petroleum hydrocarbons (TPH), semivolatile organic compounds (SVOCs), metals, polychlorinated biphenyl (PCBs) and pesticides. All eight soil samples were analyzed for volatile organic compounds (VOCs). No samples were collected at ST-16B during the initial site investigation of 1996 since this area was not considered to be of concern.

An initial soil removal action (soil excavation) was conducted at ST-16A in April 1997 to address the elevated polycyclic aromatic hydrocarbons (PAH) soil concentrations. Approximately 22 tons of soil was removed to depths ranging from 0.5 to 1.0 feet below ground surface (bgs) and was recycled following treatment using a thermal desorption system. As part of the confirmation sampling conducted during PAH-impacted soil excavation, a total of fourteen soil samples were collected at the surface and analyzed for SVOCs. Due to the presence of military operations at the motor pool area, soil removal ceased even though the confirmatory soil samples indicated PAH contamination. The confirmatory soil sampling results also indicated that the PAH-contaminated soil extended away from ST-16A and was limited to the upper 1 to 2 feet. In order to delineate the lateral extent of the PAH contamination that appeared to extend away from ST-16A, additional soil sampling was conducted at various locations, including at storage area, ST-16B.

An additional soil investigation was conducted at ST-16A/B in May and June 1997. The results of this investigation confirmed the presence of residual PAHs at elevated levels after the soil excavation activities in April 1997. Results of another soil investigation in April and May 2000 indicated that the PAH soil contamination runs along the edge of the paved area and is potentially a result of storm water runoff from the asphalt or aircraft/helicopter engine exhausts, and not a result of a release from the storage areas (OHM 2001a, b, and c).

To evaluate and estimate the total risk at the site due to elevated PAH concentrations at SI-16A/B, a preliminary screening risk evaluation of SI-16A/B was conducted using a representative data set from samples collected in May and June 1997 and supplemental sampling conducted in April and May 2000. This representative data set does not include data from the November 1996 soil sampling event since this soil was removed from the site.

The results of the risk screening including PAH constituents and other chemicals of potential concern (COPCs) within background levels indicated that the total site risk for SI-16A/B ranges from 5×10^{-5} to 8×10^{-6} for residential and industrial worker scenarios respectively, with a hazard index of 2.6 for residential scenario. For a residential scenario, the percent contribution of PAH constituents and arsenic to the excess cancer risk estimate are 49 percent and 48 percent, respectively. The reasonable maximum exposure (RME) exposure point concentration (EPC)-based excess cancer risk estimate, excluding COPCs within background levels, are 2×10^{-5} and 5×10^{-6} for residential and industrial worker scenarios, respectively.

A target risk range of one-in-ten thousand to one-in-one million chance of developing cancer (10^{-4} to 10^{-6}) is generally used to establish health protection goals as part of site cleanup. For risks that fall within the range of 10^{-4} and 10^{-6} , site-specific information is used to evaluate whether action is warranted. Site-specific risk management considerations for ST16A/B include:

- The data indicates that elevated PAH concentrations occur along the edge of asphalt pavement, suggesting that concentrations are a result of runoff and/or PAHs in the asphalt and not due to a release from SI 16A/B.
- The current risk is consistent with the residual risks for sites that have undergone removal actions (e.g., Installation Restoration Program (IRP)-2 [Oil Disposal Area] and IRP-9 [Hangar No. 1 Line Shacks] [Bechtel National Inc. (BNI) 1996b]). At IRP-2, a residual risk following the removal action was 4×10^{-5} for residential scenario. At IRP-9, residual risks for residential and recreational scenarios following the removal action were, 5×10^{-5} and 2×10^{-6} , respectively.
- When considering the total site risk to human health (including COPCs within background concentrations), arsenic and iron (which are naturally occurring) contribute 48 percent and 42 percent to cancer risk and hazard index, respectively, for a residential scenario. The risk, excluding COPCs within background, for a residential reuse scenario is 2×10^{-5} .
- The projected reuse for this area consists of a mixture of commercial, light industrial, office and residential purposes.

In addition, following extensive discussions with regulatory agencies regarding the source of the elevated PAH concentrations and the risk estimates, the Navy concluded that the source of elevated PAH concentrations is not attributable to the two storage areas (SI 16A and SI 16B). As a result, the Navy proposes the creation of a new site for PAH contamination that runs along the asphalt pavement area. This new site, Building 186 Motor Pool area, will be managed under the Petroleum Corrective Action Plan (PCAP). After inclusion into the PCAP program, a work plan will be prepared addressing the soil removal at eight locations with elevated PAH concentrations. The soil removal goal will be designed to ensure that remaining soil does not exceed maximum residual PAH concentration of 900 µg/kg [B(a)P equivalent].

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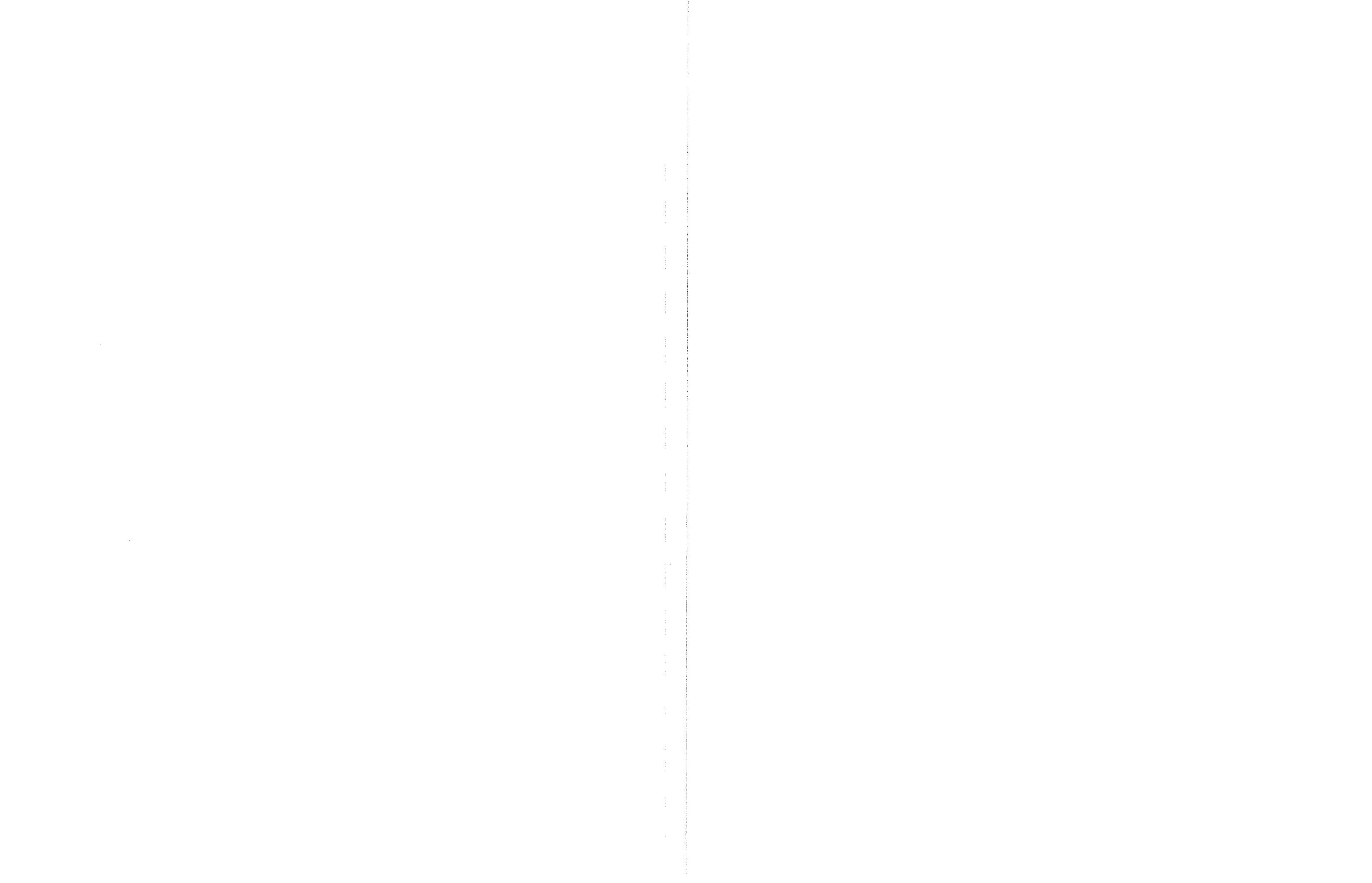
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ACRONYMS AND ABBREVIATIONS

µg/kg	micrograms per kilogram
ANL	Argonne National Laboratory
B(a)P	Benzo(a)pyrene
BCT	BRAC Cleanup Team
Bgs	below ground surface
BNI	Bechtel National, Inc.
BRAC	Base Realignment and Closure
Cal-EPA	California Environmental Protection Agency
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COPCs	chemicals of potential concern
DoN	Department of the Navy
DTSC	Department of Toxic Substances Control
EPA	Environmental Protection Agency
EPC	exposure point concentration
FR	Federal Register
GSA	General Services Administration
HI	hazard index
HRS	hazard ranking system
IAS	initial assessment study
IRP	Installation Restoration Program
LIA	lighter-than-air
Max	maximum
MCAF	Marine Corps Air Facility
MCAS	Marine Corps Air Station
mg/kg	milligrams per kilogram
mg/L	Milligram per liter
ML	sandy silt or gravelly silt
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NPL	National Priority List
OHM	OHM Remediation Services, Corp.
PAH	polycyclic aromatic hydrocarbons
PCAP	Petroleum Corrective Action Plan
PCB	polychlorinated biphenyl
PRE	preliminary risk evaluation
PRGs	preliminary remediation goals
QA/QC	quality assurance and quality control
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RME	reasonable maximum exposure
RWQCB	Regional Water Quality Control Board, Santa Ana Region
SI	site inspection
ST	storage areas
SVOC	Semi-volatile organic compound
SWDIV	Southwest Division, Naval Facilities Engineering Command
IDS	total dissolved solids
TPH	total petroleum hydrocarbons
U.S.	United States
USDA	U.S. Department of Agriculture
VOC	volatile organic compound



1. INTRODUCTION

This site inspection (SI) report for the Former Storage Areas (ST) 16A and 16B (16A/B) at the former Marine Corp Air Station (MCAS) Tustin, California, summarizes the results of previous site investigations and includes results from a preliminary risk screening conducted to evaluate human exposure to contamination at the site. This SI report has been prepared by Earth Tech on behalf of the United States (U.S.) Department of the Navy (DoN), Southwest Division Naval Facilities Engineering Command (SWDIV), in accordance with Delivery Order No. N68711-01-F-6106, issued under the General Services Administration (GSA) Contract No. GS-10F-0209K.

This SI report was prepared in accordance with guidance from the U.S. Environmental Protection Agency (EPA) and the DoN under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This SI report is prepared in accordance with EPA guidance for performing SIs under CERCLA and follows relevant regulations specified in the NCP Sections 300.410 and 300.420(c) (55 Federal Register [FR] 8845). The EPA originally developed the SI process to provide procedural guidelines to investigate potential Superfund (CERCLA) sites, using the Hazard Ranking System (HRS). The HRS is the primary way that the EPA evaluates sites for Superfund listing (i.e., National Priority List [NPL]) and rank. The SI guidelines have been employed for this project to evaluate the hazardous substance release from the site and to recommend future responses, if necessary.

The U.S. Marine Corps, as part of the DoN, is the lead agency. The DoN is working in cooperation with the MCAS Tustin Base Realignment and Closure (BRAC) Cleanup Team (BCT), which consists of representatives of the EPA, the California Environmental Protection Agency (Cal-EPA) representatives from the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB), Santa Ana, and the SWDIV.

Former MCAS Tustin was closed in July 1999 as part of the BRAC Act. A significant portion of the former base has been transferred to the City of Tustin and the remaining areas are in caretaker status under DoN management. Access to the station is controlled by security services. The majority of the buildings are unoccupied. The DoN initiated basewide source discovery and assessment at MCAS Tustin in 1985 with an initial assessment study (IAS), which was followed up by an addendum to the IAS in 1991. A Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) was initiated based on the results of the IAS and the addendum to identify sites where a potential release of hazardous substances had occurred.

1.1 OBJECTIVES OF THE SI REPORT

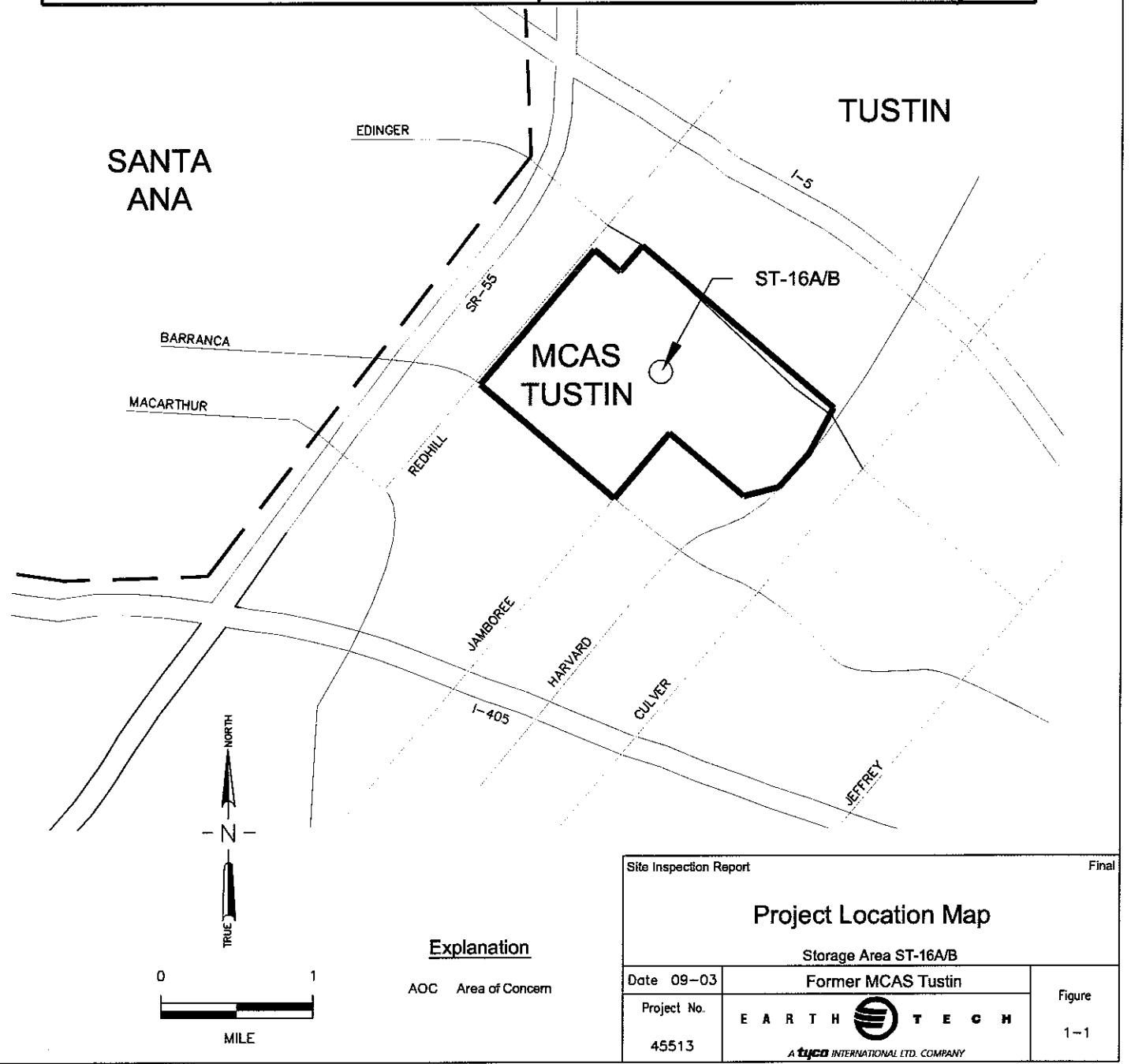
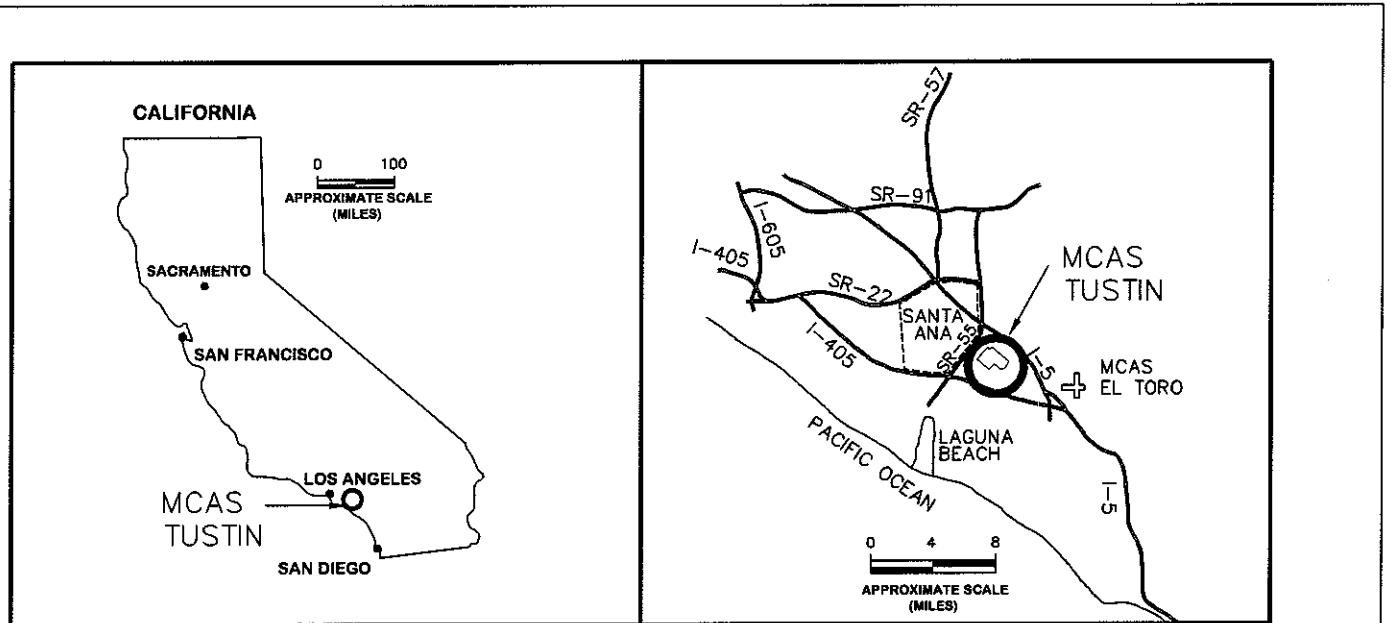
The objectives of this SI report are (1) to summarize previous investigations conducted at the site, (2) to evaluate the residual elevated polycyclic aromatic hydrocarbons (PAH) concentrations at the site, (3) conduct a risk screening evaluation and estimate the total risk to human health and the environment, and (4) recommend whether or not further action is warranted at the site based on an evaluation of remaining site contamination and results of the preliminary risk evaluation.

1.2 BACKGROUND

Former MCAS Tustin is located within central Orange County in southern California, approximately 1 mile southeast of Santa Ana and 9 miles north of Laguna Beach (see Figure 1-1). Former MCAS Tustin covers approximately 1,600 acres. Land use around the MCAS includes commercial, light industrial, and residential. Before 1942, MCAS Tustin was part of the Irvine Ranch and was used extensively for agriculture. The facility was initially established as a DoN lighter-than-air (LTA)

base to support air patrols off the southern California coast during World War II and was commissioned in the fall of 1942. MCAS Tustin was closed in 1949 and was recommissioned in 1951 to support the Korean conflict.

In 1951, the base was officially designated as the Santa Ana Marine Corps Air Facility. As the base expanded its operations, the name was changed in 1969 to MCAS (Helicopter [H]) Santa Ana. In 1978, the base name was changed to MCAS (H) Tustin to reflect its annexation by the city of Tustin. In 1986, the base was renamed MCAS Tustin. In 1997, the base name was changed to Marine Corps Air Facility (MCAF) Tustin. In 2000, MCAF Tustin was renamed MCAS Tustin (Bechtel National Inc. [BNI] 2001).



2. SETTING AND BACKGROUND

2.1 PHYSICAL SETTING AND BACKGROUND

ST-16A/B is located in the south-central area of MCAS Tustin (see Figures 1-1 and 2-1). Historical review indicates that ST-16A (located approximately 15 to 20 feet east of ST-16B) was used as a temporary hazardous waste storage unit consisting of a 17-foot by 18-foot concrete pad containing a sump and 6-inch containment berm. ST-16B was used as a storage unit that contained two paint lockers and was constructed with a plastic tarp and a sandbag containment berm. Both storage units are located north of Building 186 in the motor pool area adjacent to an asphalt parking area. The motor pool area was used for storage and maintenance of heavy equipment including cranes, dozers, loaders, dump trucks, JP-5 tanker trucks, and generators.

Site ST-16A was initially investigated in November 1996 and the surface soil (top 2 feet) indicated PAH contamination at few locations. Additional investigations between 1997 and 2000 were conducted to further evaluate the PAHs in the soil along the asphalt and are discussed in Section 3.0.

2.2 ENVIRONMENTAL SETTING AND BACKGROUND

2.2.1 Geology

MCAS Tustin is located in the central region of the Tustin Plain. Subsurface lithology consists of outwash sediments derived from the Santa Ana Mountains. The stratigraphy underlying the Tustin Plain, from the surface down, consists of Holocene alluvium (approximately 30 feet); Pleistocene stream terrace and older alluvium (about 250 feet thick); Pleistocene San Pedro Formation of semi-consolidated sand, gravel, silts, and clays containing limestone interbeds of lagoon or shallow marine origin to 1,000 feet; semi-consolidated-to-consolidated tertiary sedimentary rocks (2,000 to 2,500 feet thick); and Mesozoic and older igneous and metamorphic bedrock (BNI 1996a). Station soils were classified into four types within the Chino and Omni series in a soil survey conducted by the U.S. Department of Agriculture (USDA) (USDA 1978). The site is predominantly covered by Chino soils (sandy silt or gravelly silt [ML]) described as somewhat poorly drained, moderately alkaline and calcareous with low-strength properties and moderate potential for shrink-swell. The remainder of the soils grouped under the Omni series (silty clay) consist of poorly drained soils, strongly alkaline to moderately saline, with a low property of shrinkage (BNI 1996a).

MCAS Tustin is located within the Irvine groundwater basin and consists of approximately 1,400 feet of unconsolidated-to-semi-consolidated sedimentary materials made up of Quaternary clay and silt deposits of alluvial, fluvial, stream terrace, lagoonal, and shallow marine origin. The San Pedro Formation underlies the top 300 feet of alluvial deposits and generally contains the major aquifer in the area. Within the subbasin, there are layers of thick silt and clay deposits near the surface separating the aquifer into confined and unconfined zones. MCAS Tustin is underlain by a confined aquifer zone (BNI 1996a), where the upper 100 feet of sedimentary strata is 60 percent to 90 percent clay. The shallow groundwater extends to an approximate depth of 100 feet below ground surface (bgs) (Argonne National Laboratory (ANL) 1995).

2.2.2 Hydrogeology

Regional groundwater flow is to the west from the recharge area in the Santa Ana Mountains and San Joaquin Hills and then southwest toward Upper Newport Bay. The groundwater flow is estimated to be 20 feet per year in the main aquifer (BNI 1996a). In the shallow groundwater zone, groundwater flow is 0.5 feet to 5 feet per year (BNI 1996a).

2.2.3 Groundwater

Groundwater quality in the shallow aquifer beneath the station ranges from brackish to saline. The total dissolved solids (TDS) concentrations exceeded 10,000 milligrams per liter (mg/L) in the uppermost or first water bearing zone in the downgradient lowland areas of the station along Peters Canyon Channel. The primary causes of the high TDS in the shallow groundwater at MCAS Tustin are likely to be cyclic downward leaching of salts by infiltrating water from precipitation and irrigation and the loss of moisture through evaporation from the shallow water table and vadose zone (BNI 1999a).

The city of Tustin operates 11 wells for the potable water supply. The closest of these wells is approximately 1 mile north of MCAS Tustin. The City of Irvine, the Irvine Company, and MCAS Tustin purchase water from the Irvine Ranch Water District. Six agricultural wells (I-WALN, OSUM-T, TIC-78, TIC-106, TIC-108, and TIC-113) are within a 3.5-mile radius of the landing circle of MCAS Tustin. Osumi Farms formerly operated one well (OSUM-T) on station property for agricultural purposes. This single on-base well, OSUM-T, was operated on demand and its pumping capacity was estimated to be 2,000 to 3,000 gallons per minute (BNI 1999a).

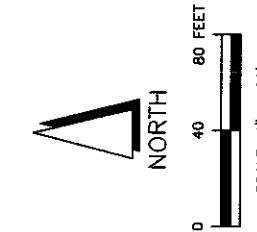
2.3 SURROUNDING LAND USE AND POPULATIONS

The majority of the land immediately surrounding MCAS Tustin is residential. Areas located to the south, southeast, and southwest have been developed for commercial, light industrial, and residential uses. The future use of the land, as specified in the approved Reuse Plan (October 1996), for the area currently occupied by these storage areas will be factored into the recommended risk management decision. The current ST 16A/B reuse plan for MCAS Tustin has identified ST-16A/B and its surrounding property for community core land use. Community core land use includes commercial, light industrial, office, and residential, and permits nearly 1,000 residential units to be constructed anywhere within the entire community core land use footprint.

LEGEND:

EXISTING FEATURE

ST-16B
ST-16A



SCALE: 1" = 80'

Site Location Map	
Sils Inspection Report	
Date 09-03	Former MCAS Tustin
Project No.	EARTH TECH
45513	Attn:  INTERTECH LTD COMPANY
Figure 2-1	2-1

3. PREVIOUS INVESTIGATIONS AND SITE CHARACTERIZATION

Information for this section was taken primarily from the *Site Inspection Plan* (BNI 1988), and the *Temporary Storage Unit ST-16A/B Update Reports* (OHM 2001a, b, and c).

3.1 INITIAL SITE INVESTIGATION OF 1996

Storage area ST-16A was originally investigated in November 1996 under the RCRA Program. As part of this investigation, a total of 8 soil samples (including 1 duplicate sample) were collected at the surface and 3 feet bgs. These soil sample locations were located around storage area ST-16A. All eight soil samples were analyzed for volatile organic compounds (VOCs) and only 6 soil samples were analyzed for total petroleum hydrocarbons (TPH), semivolatile organic compounds (SVOCs), metals, polychlorinated biphenyl (PCBs) and pesticides.

Table A-1 in Appendix A summarizes the analytical results of the initial site investigation of 1996 and also presents a summary of the benzo(a)pyrene [B(a)P] equivalent concentrations for these samples.

3.2 SOIL REMOVAL ACTION OF APRIL 1997

An initial soil removal action (soil excavation) was conducted at ST-16A in April 1997 to address PAH contamination at the site. Approximately 22 tons of soil (to depths ranging from 0.5 to 1.0 feet bgs) was removed and was recycled following treatment using a thermal desorption system. As part of this soil excavation and confirmatory sampling, a total of fourteen soil samples (including one duplicate sample) were collected near the surface (0.5 and 1 foot bgs) and analyzed for SVOCs. These soil samples were collected from the sidewalls and the floor of the excavated areas. Due to the presence of military operations at the motor pool area, soil removal activities ceased even though sampling indicated more PAH contamination spatially and that the PAH-contaminated soil extended away from ST-16A; however, it was limited to the upper 1 to 2 feet (See Figure 3-1 and Table A-1).

Additional sampling activities that were conducted during 1997 and 2000 focused on the remaining portion of the site and results from these sampling activities are discussed below.

3.3 ADDITIONAL SOIL SAMPLING OF MAY AND JUNE 1997

During May and June 1997, a total of sixteen additional soil samples (including two duplicates) were collected at the surface and 0.5 feet bgs around ST-16A and ST-16B storage areas and along the edge of the asphalt pavement extending beyond the storage area. The results of the analyses indicated that PAHs were present at elevated levels in those locations (See Figure 3-1 and Table A-2).

3.4 ADDITIONAL SOIL SAMPLING OF APRIL/MAY 2000

In April/May 2000, a total of 32 additional soil samples (including 1 duplicate sample) were collected at the surface and two feet bgs from borings adjacent to the edge of the asphalt along the entire edge of the asphalt area (approximately 1000 feet). A few of the soil sampling locations extended approximately 100 feet away from the edge of the asphalt pavement (See Figure 3-1 and Table A-2). Samples were collected at the surface and 2 feet bgs and analyzed for TPH, VOCs, SVOCs, metals, PAHs, PCBs, pesticides, mercury, and cyanide. The result of this soil investigation indicated that the PAH soil contamination runs along the edge of the paved area and is potentially a result of storm water runoff from the asphalt or aircraft/helicopter engine exhausts or PAHs in asphalt, and not a result of a release from the storage areas (OHM 2001a, b, and c).

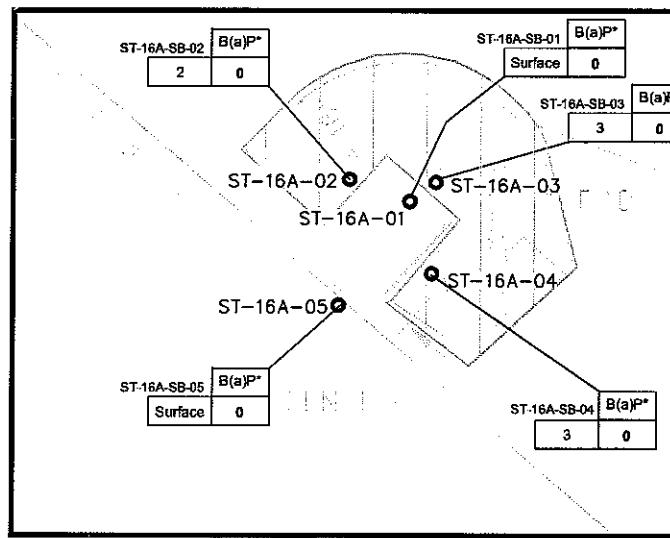
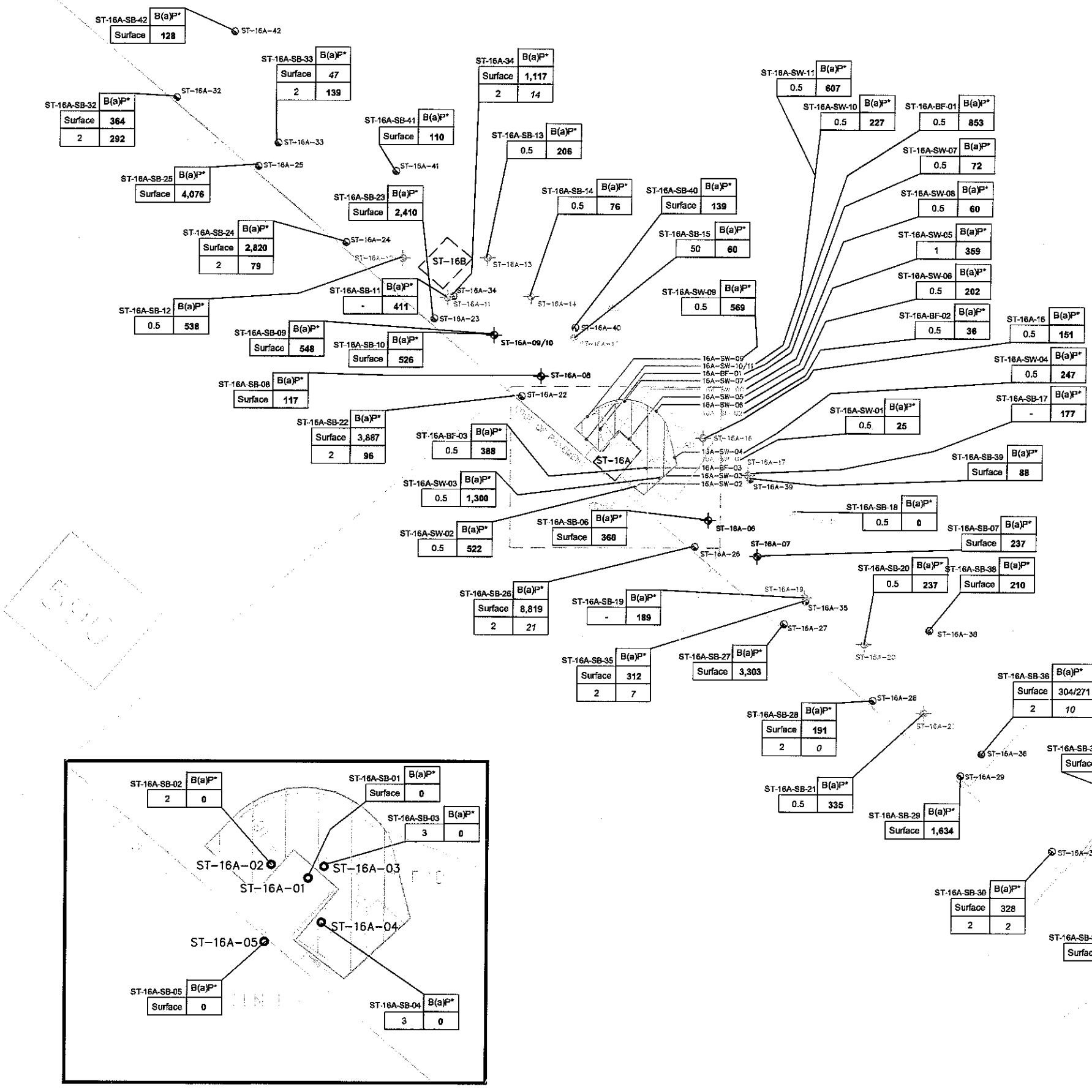
3.5 SITE CHARACTERIZATION

This section presents the nature and extent of the contamination currently found at site ST-16A/B. Since the soil from which the initial soil samples were collected was removed in 1997, the soil samples collected during initial investigation of 1996 are not included in this site characterization summary. The summary of analytical result, from soil samples collected after the initial investigation of 1996 (a total of 62 soil samples), indicated that:

- The highest PAH concentrations were at soil boring location ST-16A-26 (surface soil sample collected at the edge of the asphalt), where ten PAH compounds were reported at concentrations ranging from 1,800 micrograms per kilogram ($\mu\text{g}/\text{kg}$) to 8,900 $\mu\text{g}/\text{kg}$.
- Benzo(a)anthracene was reported in 57 of the 62 samples at concentrations ranging from 5.3 $\mu\text{g}/\text{kg}$ to 3,700 $\mu\text{g}/\text{kg}$.
- Benzo(a)pyrene was reported in 60 of the 62 samples at concentrations ranging from 0.93 $\mu\text{g}/\text{kg}$ to 6,100 $\mu\text{g}/\text{kg}$.
- Benzo(b)fluoranthene was reported in 60 of the 62 samples ranging from 330 to 8,900 $\mu\text{g}/\text{kg}$.
- Several VOCs were reported below their respective residential preliminary remediation goals (PRGs) in shallow soils at ST-16A/B.
- IPH (diesel) compounds were detected in soil at 2 feet bgs by the on-site laboratory at concentrations ranging from 12 to 460 milligrams per kilogram (mg/kg).
- The detected metals were at or below background levels and included arsenic, lead, and manganese.
- The detected PCBs were below the reporting limits and/or the residential PRG.

Table A-2 in Appendix A presents the analytical data from confirmatory soil sampling conducted during April 1997 after soil removal. Table A-3 in Appendix A presents the analytical results of additional soil sampling activities of May and June 1997, and April/May 2000. Table A-4 of Appendix A presents a summary of the B(a)P equivalent concentrations at all ST-16A/B sampling locations, except the initial investigation of 1996. Figure 3-1 shows the soil sampling locations from all investigations and carcinogenic PAH results [B(a)P equivalent concentrations] at ST-16A/B. These results show that the highest carcinogenic PAH concentrations occur along the edge of the asphalt paved area. These concentrations are, in general, an order of magnitude higher than carcinogenic PAH concentrations at locations 100 feet away from the asphalt paving.

Review of the data tables provided by OHM indicates that the soil samples have been taken from appropriate locations and depth. Laboratory documentation to support the analytical procedures used to derive the data (e.g., laboratory quality assurance/quality control [QA/QC] procedures) was assumed to be sufficient. Overall, the previous analytical data was deemed to be reliable and useable for the purposes of evaluating the site for hazardous substance release.



Site Inspection Report
Previous Sampling Locations and Results - ST-16A/B

Date:	09-03	FORMER MCAS Tustin	Figure 3-1
Project No.	E A R T H T E C H	A T YCO INTERNATIONAL LTD. COMPANY	
45513			

4. PRELIMINARY SCREENING RISK EVALUATION

To estimate the total site risk due to elevated residual PAH concentrations at ST-16A/B, a preliminary risk evaluation (PRE) of ST-16A/B was performed. The risk screening objective was to generate enough information to enable the Navy and regulatory agencies to identify the next course of action for the site.

The preliminary risk screening was performed at ST-16A/B to evaluate and estimate risks associated with the residual PAH contamination after the initial removal action of April 1997. This evaluation estimates the total cancer risk (expressed as a probability) and non-cancer risk (expressed as hazard index [HI]) and identifies the risk and hazard drivers by comparing the exposure point concentrations (EPCs) to default residential and industrial PRGs, since the proposed reuse for this area consists of a mixture of commercial, light industrial, office, and residential purposes.

4.1 RISK SCREENING APPROACH

The steps employed for this risk evaluation are listed below:

1. Calculation of maximum (Max) and reasonable maximum exposure (RME) EPCs for all detected contaminants of potential concern (COPCs) (see Appendix B).
2. For each exposure scenario, the Max and RME EPCs are compared to their respective residential and industrial PRGs to identify the risk and hazard drivers. Default residential and industrial exposure parameters were assumed to be the same as those conceptualized by EPA Region IX in its development of the PRG table.
3. For a particular scenario, excess cancer risk and hazard quotients are calculated for all COPCs identified.
4. Cumulative excess cancer risks and HI are calculated. The RME EPC-based cumulative excess cancer risks are compared with the acceptable target risk of 10^{-6} and a target hazard index of 1.

4.2 SELECTION OF CHEMICALS OF POTENTIAL CONCERN

For the purposes of this risk screening, the COPCs are defined as those organic chemicals and metals detected above background and are potentially present as a result of base activities. Analytical results from surface soil analyses were evaluated to identify the human health COPCs for the PRE.

The primary focus of this risk evaluation is the PAH compounds in the soil, because they have been determined to be the primary risk drivers in the soil at ST-16A/B. While the primary focus is on PAH compounds, results of the additional site investigation in April and May 2000 identified other COPCs. All COPCs are listed below:

VOCs – methylene chloride.

SVOCs – bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, and diethyl phthalate.

PAHs – anthracene, acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene.

Pesticides – 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, alpha-chlordane, dieldrin, heptachlor, and methoxychlor.

Total petroleum hydrocarbons (diesel).

Other constituents like inorganic chemicals were retained in the risk assessment in order to provide a total site risk to human health. Risk estimates were generated by removing the contribution of those chemicals that were below the background concentrations. These results are presented in Tables B-2 and B-3 as cumulative excess cancer risk/hazard index excluding COPCs within background. These constituents include: aluminum, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, molybdenum, nickel, potassium, sodium, thallium, vanadium, and zinc.

4.2.1 Evaluation of Health Effects Caused by Exposure to Lead

Lead data were compared to the Region IX residential and industrial criteria for soils of 400 mg/kg and 750 mg/kg, respectively. The RME EPC for lead is 35 mg/kg; this value is considered consistent with background and was less than the lead criteria. Thus, additional characterization of lead exposure is not deemed necessary.

4.3 RISK SCREENING DATA SET

The risk evaluation was performed using the analytical results from confirmatory samples (post-removal action of April 1997) and additional soil samples collected during May and June 1997, and April and May 2000 in order to estimate the risk for current conditions. The risk evaluation does not include the samples from initial soil investigation of 1996. The risk evaluation was conducted using analytical results from 62 soil samples. Table B-1 in Appendix B summarizes information about the sample identification, date and depth of sample collection, and PAH analyses methods.

PAHs were analyzed as part of the SVOC analyte list (i.e., EPA method 8270) during the initial site investigation of 1996, confirmatory soil sampling from April 1997, and additional soil sampling in May and June 1997. During the April and May 2000 investigation, PAHs were analyzed in the laboratory mainly using EPA Method 8310. Of the thirty-two soil samples collected, 10 soil samples were analyzed for PAHs using both EPA 8270 and EPA 8310 methods. Ten of thirty-two soil samples collected during the April and May 2000 investigation were analyzed for PAHs using EPA methods 8270 and 8310. The remaining 22 samples were analyzed by EPA method 8310 only.

Therefore, a representative data set, which includes PAH data from all investigations and analyzed by different EPA methods was created. This data set was deemed more representative of the area since it is a larger data set; it covered a larger area and included confirmatory soil samples collected near ST-16A. In order to conduct risk screening from a representative data set, the EPA 8270 and 8310 data sets for the 10 samples (from April and May 2000) were handled as follows. For the 10 samples that were analyzed by both methods, the representative risk screen table used the higher concentration of any detected analytes (using EPA methods 8270 and 8310) or the lower value of the two reporting limits (typically EPA 8310) if both results were non-detects. The PAH data set for the representative PRE conducted using both the EPA methods 8270 and 8310, had 62 samples (14 [confirmation samples in April 1997 after removal action] plus 16 [additional soil boring samples in May and June 1997] plus 32 [additional samples in May 2000]).

4.4 RESULTS OF SCREENING PRE

Table 4-1 presents a summary of risk and hazard indices for the main risk drivers, while Tables B-2 and B-3 of Appendix B present the results of the risk screening for all COPCs.

Table 4-1 Summary of Total Hazard Indices and Cancer Risks for Preliminary Screening Risk Evaluation (Representative Data Set)

Receptor	Based on RME EPC		Risk (carcinogenic)		Hazard Driver	% Contribution to HI
	HI	Total Cancer Risk	Risk Drivers	% Contribution to Risk		
Residential						
Including COPCs within Background	2.6	5E-05	benzo(a)pyrene benzo(b)fluoranthene dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene arsenic	31 6 7 5 48	Iron	42
Excluding COPCs within Background	<1	2E-05	benzo(a)pyrene benzo(b)fluoranthene dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene	60 12 14 10	-	-
Industrial Worker						
Including COPCs within Background	<1	8E-06	benzo(a)pyrene arsenic Benzo(a)anthracene Benzo(b)fluoranthene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene	37 38 2 8 8 6	-	-
Excluding COPCs within Background	<1	5E-06	benzo(a)pyrene Benzo(a)anthracene Benzo(b)fluoranthene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene	61 3 12 14 10	EPC	exposure point concentrations

Notes:

- not applicable
RME reasonable maximum exposureHI hazard index
COPC chemicals of potential concern

A risk driver is a COPC that presents a substantial majority of the cancer risk individually or in combination with other carcinogenic COPCs.

A hazard driver is a COPC with a multi-pathway hazard index (HI) accounting for a substantial majority of the HI, when the HI exceeds 1.0.

The total site risk (including COPCs within background) for ST-16A/B ranges from 5E-05 to 8E-06 for residential and industrial worker scenarios, respectively, with a hazard index of 2.6 for the residential scenario. For the residential scenario, the percent contribution of PAH constituents and arsenic to the excess cancer risk estimate is 49%, and 48%, respectively. For the industrial scenario, the percent contribution of PAH constituents, and arsenic to the excess cancer risk estimate value are 61% and 38%, respectively. In addition, iron contributes 42% of the hazard index for the residential scenario.

The RME EPC-based excess cancer risk estimate excluding COPCs within background ranges from 2E-05 to 5E-06 for residential and industrial worker scenarios, respectively.

4.5 RISK MANAGEMENT CONSIDERATIONS

The risk evaluation results indicate the risk at ST-16A/B is within the risk management range of 10^{-4} to 10^{-6} . The following risk management considerations should be evaluated as part of the decision making process.

- The results of previous investigations at ST-16A/B clearly indicate that the highest PAH concentrations are found along the edge of the asphalt area (e.g., the highest PAH concentrations are detected at ST-16A-26, located at the surface along the edge of the asphalt paved area). The elevated PAHs are likely due to runoff from the asphalt paving or from PAHs in the asphalt.
- Consideration of soil removal actions at other PAH contaminated sites at MCAS Iustin, their cleanup goals and the associated risk estimates prior to and after soil removal (e.g., IRP-2 [Oil Disposal Area] and IRP-9 [Hangar No. 1 Line Shacks] [BNI 1996b]).
- The contribution of naturally occurring constituents to the risk and hazard index.
- The projected reuse for this area consists of a mixture of commercial, light industrial, office and residential purposes.

5. CONCLUSIONS AND RECOMMENDATIONS

A target risk range of 10^{-4} to 10^{-6} is generally used to establish health protection goals as part of site cleanup. Risks greater than 10^{-4} are considered unacceptable and action is recommended. Risks less than 10^{-6} are considered acceptable. Risks that fall within the range of 10^{-4} and 10^{-6} are considered to be within the risk management range. Site-specific information is used by risk managers to evaluate whether action is warranted.

Site ST-16A/B has been adequately characterized, and the extent of the PAH impact has been delineated. The risk screening results indicate a total site risk of 5×10^{-5} for a residential reuse scenario and 8×10^{-6} for an industrial reuse scenario. Therefore given the following:

- The total risk at the site is within the risk management decision range of 10^{-4} to 10^{-6} .
- The current risk is consistent with the residual risks for sites that have undergone removal actions (e.g., IRP-2 and IRP-9).
- The data indicate that elevated PAH concentrations occur along the edge of asphalt paving and are likely due to PAHs in the asphalt, as well as from runoff.
- For a residential reuse scenario, considering COPCs including background, naturally occurring arsenic contributes to 48 percent to cancer risk estimate and iron contributes to 42 percent to noncarcinogenic hazard index.

In addition, following extensive discussions with regulatory agencies (See Appendix C) regarding the source of the elevated PAH concentrations and the risk estimates, the Navy concluded that the source of elevated PAH concentrations is not attributable to the two storage areas (ST 16A and ST 16B). As a result, the Navy proposes the creation of a new site for PAH contamination that runs along the asphalt pavement area. This new site, Building 186 Motor Pool area, will be managed under the Petroleum Corrective Action Plan (PCAP). After inclusion into the PCAP program, a work plan will be prepared addressing the soil removal at the eight location with elevated PAH concentrations. The soil removal goal will be designed to ensure that remaining soil does not exceed maximum residual PAH concentration of 900 µg/kg [B(a)P equivalent].

6. REFERENCES

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- OHM Remediation Services, Corp. (OHM). 2001a, b and c. Temporary Storage Unit ST-16A/B Update – BCI presentation by OHM. *Marine Corps Air Facility, Tustin, California*. San Diego, CA. 7 December 2000.
- U.S. Department of Agriculture (USDA), Soil Conservation Service. 1978. *Soil Survey Of Orange County and Western Part of Riverside County, California*. September.

Appendix A
Analytical Data Summary Tables

(Tables A-1, A-2 and A-3 provided by OHM Remediation Services Corporation)

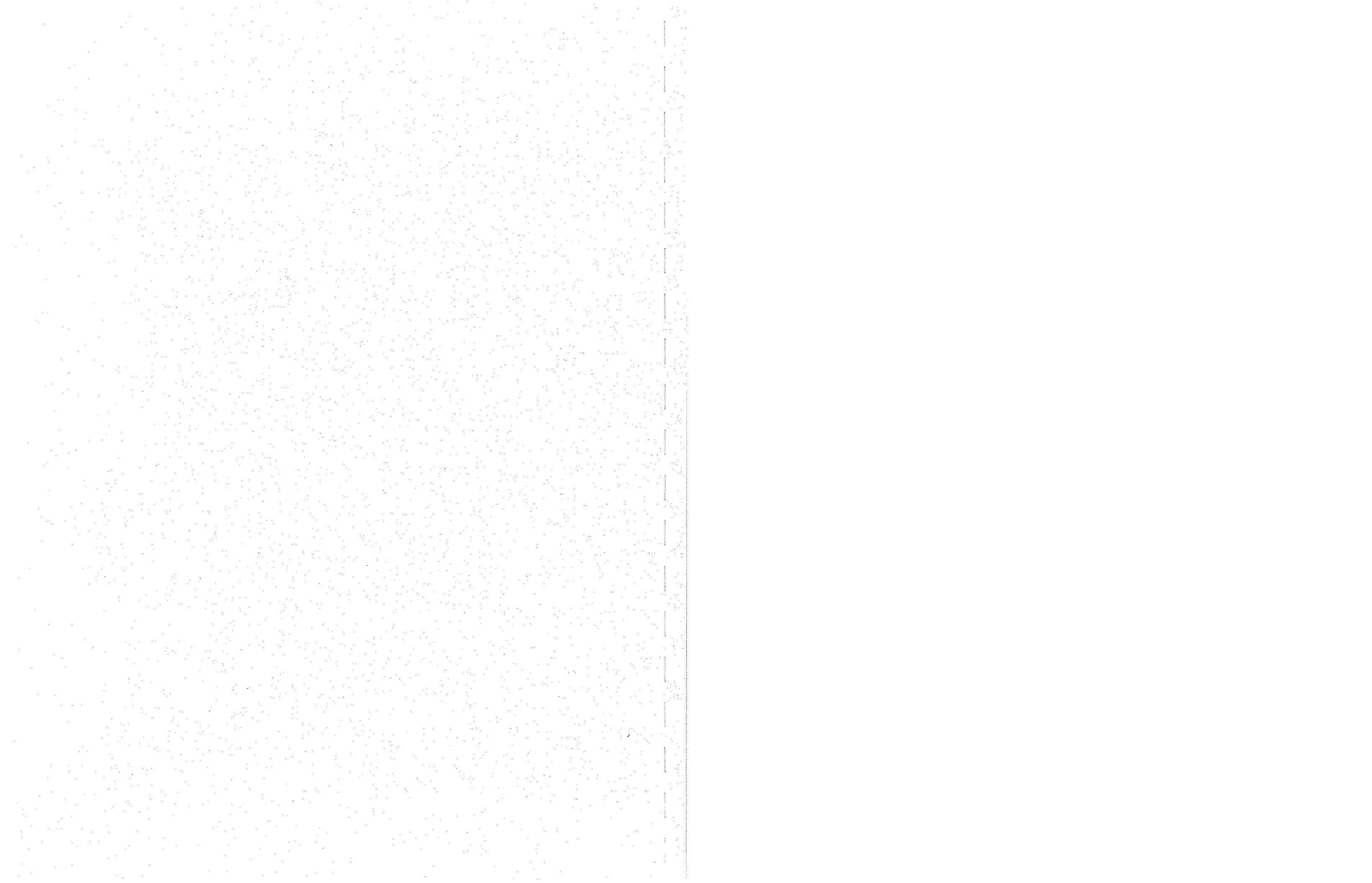


Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification	17306-737 ST-16A-SB-01 11/22/96	17306-738 ST-16A-SB-01 11/22/96	17306-729 ST-16A-SB-02 11/22/96	17306-731 ST-16A-SB-03 11/22/96	17306-733 ST-16A-SB-04 11/22/96
Location Code	17306-737 ST-16A-SB-01 11/22/96	17306-738 ST-16A-SB-01 11/22/96	17306-729 ST-16A-SB-02 11/22/96	17306-731 ST-16A-SB-03 11/22/96	17306-733 ST-16A-SB-04 11/22/96
Date Sampled	11/22/96	11/22/96	11/22/96	11/22/96	11/22/96
Depth (feet below ground surface)	Surface	3.0	3.0	3.0	3.0
Unit	Result Qfr RDL	MDL	Result Qfr RDL	MDL	Result Qfr RDL
C4 LUFT 8015M					
TPH as Diesel	mg/kg 13 U NA	13	2.4	NA	NA
TPH as Gasoline	mg/kg 13 U	13	*	NA	NA
Unknown Hydrocarbons					
EPA 6010					
Aluminum	mg/kg 25000	65.9	3	NA	NA
Antimony	mg/kg 20 UJ	19.8	2	NA	NA
Arsenic	mg/kg 8.9	0.66	0.5	NA	NA
Barium	mg/kg 140	13.2	0.4	NA	NA
Beryllium	mg/kg 0.91 J	1.3	0.1	NA	NA
Cadmium	mg/kg 0.50 J	0.53	0.05	NA	NA
Calcium	mg/kg 12000	132	10	NA	NA
Chromium	mg/kg 28	6.6	0.6	NA	NA
Cobalt	mg/kg 10	6.6	0.3	NA	NA
Copper	mg/kg 32	6.6	1	NA	NA
Iron	mg/kg 32000	6.6	2	NA	NA
Lead	mg/kg 12	0.66	0.1	NA	NA
Magnesium	mg/kg 12000	132	5	NA	NA
Manganese	mg/kg 400	2.6	0.1	NA	NA
Molybdenum	mg/kg 2.5 J	5.3	0.8	NA	NA
Nickel	mg/kg 19 J	19.8	1	NA	NA
Potassium	mg/kg 4900	132	50	NA	NA
Selenium	mg/kg 0.66 U	0.66	0.3	NA	NA
Silver	mg/kg 1.3 U	1.3	0.4	NA	NA
Sodium	mg/kg 290	132	100	NA	NA
Thallium	mg/kg 9.2 U	9.2	0.2	NA	NA
Tin	mg/kg 13 U	13.2	0.4	NA	NA
Vanadium	mg/kg 60	13.2	0.4	NA	NA
Zinc	mg/kg 94	2.6	0.8	NA	NA
Mercury	mg/kg 0.045 J	0.13	0.02	NA	NA
4,4'-DDD	µg/kg 20 U	20	0.41	NA	NA
4,4'-DDE	µg/kg 20 U	20	0.36	NA	NA

Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	Unit	17306-737 ST-16A-SB-01 11/22/96			17306-738 ST-16A-SB-01 11/22/96			17306-729 ST-16A-SB-02 11/22/96			17306-731 ST-16A-SB-03 11/22/96			17306-733 ST-16A-SB-04 11/22/96		
		Surface			3.0			3.0			3.0			3.0		
		Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
4,4'-DDT	µg/kg	20 U	20	0.42	NA	NA	NA									
Aldrin	µg/kg	99 U	99	0.17	NA	NA	NA									
alpha-BHC	µg/kg	9.9 U	9.9	0.17	NA	NA	NA									
alpha-Chlordane	µg/kg	9.9 U	9.9	0.25	NA	NA	NA									
Aroclor-1016	µg/kg	220 U	220	3.3	NA	NA	NA									
Aroclor-1221	µg/kg	220 U	220	3.3	NA	NA	NA									
Aroclor-1232	µg/kg	220 U	220	3.3	NA	NA	NA									
Aroclor-1242	µg/kg	220 U	220	3.3	NA	NA	NA									
Aroclor-1248	µg/kg	220 U	220	3.3	NA	NA	NA									
Aroclor-1254	µg/kg	220 U	220	3.3	NA	NA	NA									
Aroclor-1260	µg/kg	220 U	220	3.3	NA	NA	NA									
Beta-BHC	µg/kg	99 U	99	0.17	NA	NA	NA									
Delta-BHC	µg/kg	99 U	99	0.17	NA	NA	NA									
Dieldrin	µg/kg	20 U	20	0.33	NA	NA	NA									
Endosulfan I	µg/kg	99 U	99	0.17	NA	NA	NA									
Endosulfan II	µg/kg	20 U	20	0.33	NA	NA	NA									
Endosulfan sulfate	µg/kg	20 U	20	0.33	NA	NA	NA									
Endrin	µg/kg	20 U	20	0.33	NA	NA	NA									
Endrin aldehyde	µg/kg	20 U	20	0.33	NA	NA	NA									
gamma-BHC	µg/kg	99 U	99	0.17	NA	NA	NA									
gamma-Chlordane	µg/kg	9.9 U	9.9	0.17	NA	NA	NA									
Heptachlor	µg/kg	13 U	13	0.23	NA	NA	NA									
Heptachlor epoxide	µg/kg	13 U	13	0.23	NA	NA	NA									
Methoxychlor	µg/kg	99 U	99	0.23	NA	NA	NA									
Toxaphene	µg/kg	1100 U	1100 *	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EPA 8260.4																
1,1,1-Trichloroethane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
1,1,2,2-Tetrachloroethane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/kg	6.6 U	6.6	0.5	NA	NA	NA	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
1,1,2-Trichloroethane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
1,1-Dichloroethane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
1,1-Dichloroethene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
1,2-Dichloroethane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
1,2-Dichloropropane	µg/kg	6.6 U	6.6	0.5	NA	NA	NA									



Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	Unit	17306-737 ST-16A-SB-01 11/22/96 Surface			17306-738 ST-16A-SB-01 11/22/96 3.0			17306-729 ST-16A-SB-02 11/22/96 3.0			17306-731 ST-16A-SB-03 11/22/96 3.0			17306-733 ST-16A-SB-04 11/22/96 3.0		
		Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
		µg/kg	13 U	13	1	12 U	12									
2-Butanone (MEK)	µg/kg	13 U	13	0.5	12 U	12	0.5									
2-Chloroethyl vinyl ether	µg/kg	13 U	13	1	12 U	12	1									
2-Hexanone	µg/kg	13 U	13	1	12 U	12	1									
4-Methyl-2-pentanone (MIBK)	µg/kg	13 U	13	0.5	12 U	12	0.5									
Acetone	µg/kg	13 U	13	4	12 U	12	4									
Benzene	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Bromodichloromethane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Bromoform	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Bromomethane	µg/kg	6.6 U	6.6	1	5.9 U	5.9	1	6.1 U	6.1	1	6.0 U	6.0	1	6.2 U	6.2	1
Carbon disulfide	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Carbon tetrachloride	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Chlorobenzene	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Chloroethane	µg/kg	6.6 U	6.6	1	5.9 U	5.9	1	6.1 U	6.1	1	6.0 U	6.0	1	6.2 U	6.2	1
Chloroform	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Chloromethane	µg/kg	6.6 U	6.6	3	5.9 U	5.9	3	6.1 U	6.1	3	6.0 U	6.0	3	6.2 U	6.2	3
cis-1,2-Dichloroethene	µg/kg	6.6 U	6.6	1	5.9 U	5.9	1	6.1 U	6.1	1	6.0 U	6.0	1	6.2 U	6.2	1
cis-1,3-Dichloropropene	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Dibromo-chloromethane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Dichlorodifluoromethane	µg/kg	6.6 U	6.6	6.6	NA	NA	NA									
Ethylbenzene	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Methyl tert-butyl ether (MTBE)	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Styrene	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Tetrachloroethene	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Toluene	µg/kg	6.6 U	6.6	0.97	5.9 U	5.9	0.97	6.0 U	6.0	0.97	6.0 U	6.0	0.97	6.2 U	6.2	0.97
trans-1,2-Dichloroethene	µg/kg	6.6 U	6.6	0.66	5.9 U	5.9	0.59	6.1 U	6.1	0.61	6.0 U	6.0	0.60	6.2 U	6.2	0.62
trans-1,3-Dichloropropene	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Trichloroethene	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Trichlorofluoromethane	µg/kg	6.6 U	6.6	0.5	5.9 U	5.9	0.5	6.1 U	6.1	0.5	6.0 U	6.0	0.5	6.2 U	6.2	0.5
Vinyl acetate	µg/kg	13 U	13	2	12 U	12	2									
Vinyl chloride	µg/kg	6.6 U	6.6	2	5.9 U	5.9	2	6.1 U	6.1	2	6.0 U	6.0	2	6.2 U	6.2	2
Xylenes (total)	µg/kg	6.6 U	6.6	1.4	5.9 U	5.9	1.4	2.3 J	6.1	1.4	6.0 U	6.0	1.4	6.2 U	6.2	1.4
EPA 8270	µg/kg	400 U	400	23	NA	NA	22	360 U	360	23	360 U	360	22	380 U	380	23
1,2,4-Trichlorobenzene	µg/kg	400 U	400	22	NA	NA	22	360 U	360	22	360 U	360	22	380 U	380	22

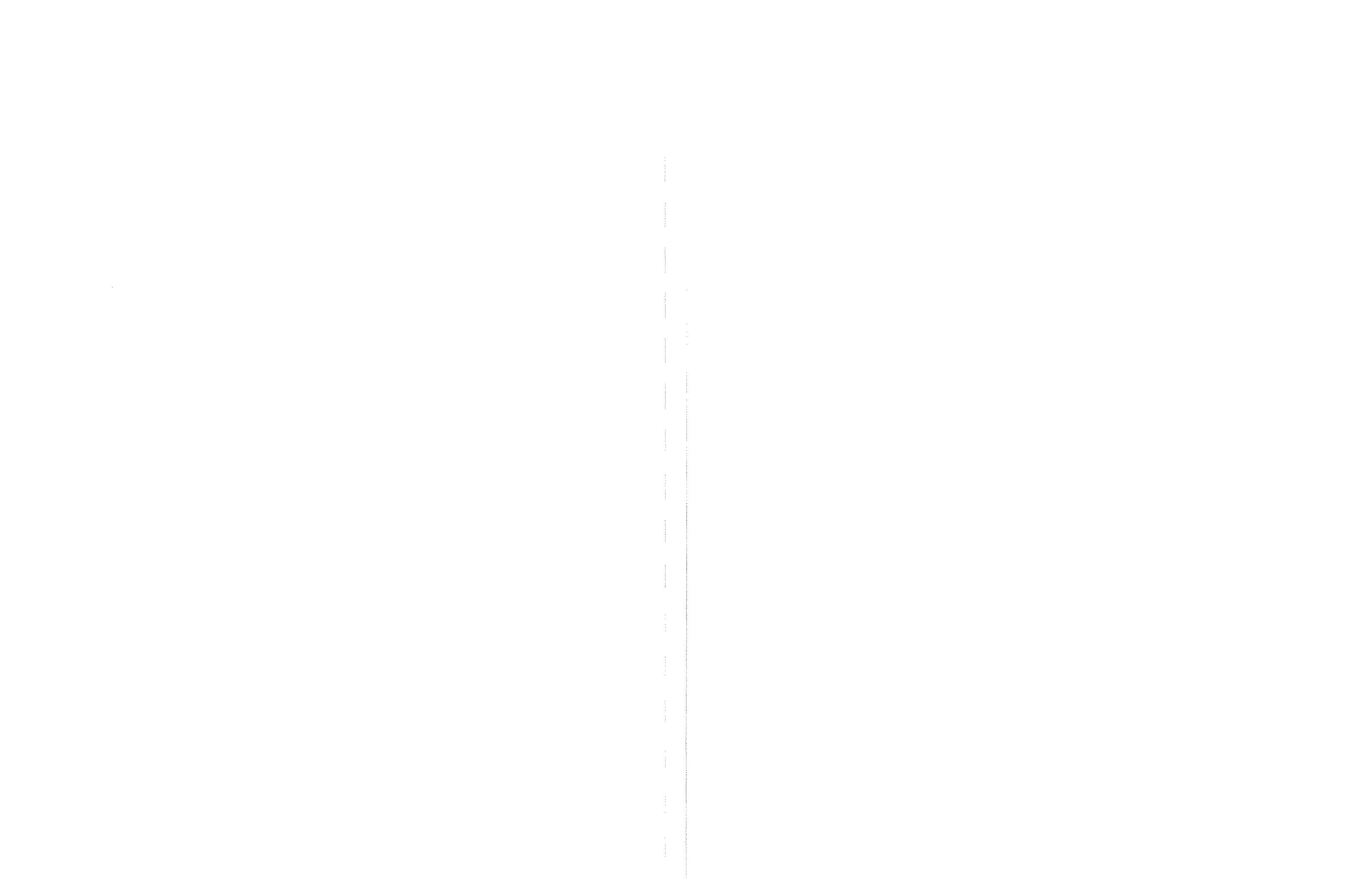


Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	Unit	17306-737			17306-738			17306-729			17306-731			17306-733			
		ST-16A-SB-01 11/22/96			ST-16A-SB-01 11/22/96			ST-16A-SB-02 11/22/96			ST-16A-SB-03 11/22/96			ST-16A-SB-04 11/22/96			
		Surface			3.0			3.0			3.0			3.0			
		Result	Qfr	RDL	MDL	Result	Qfr	RDL	MDL	Result	Qfr	RDL	MDL	Result	Qfr	RDL	MDL
1,3-Dichlorobenzene	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	360 U	360	17	380 U	380	17
1,4-Dichlorobenzene	µg/kg	400 U	400	21	NA	360 U	360	21	360 U	360	21	380 U	380	21	380 U	380	21
2,4,5-Trichlorophenol	µg/kg	2100 U	2100	23	NA	1900 U	1900	23	1900 U	1900	23	2000 U	2000	23	2000 U	2000	23
2,4,6-Trichlorophenol	µg/kg	400 U	400	19	NA	360 U	360	19	360 U	360	19	380 U	380	19	380 U	380	19
2,4-Dichlorophenol	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
2,4-Dimethylphenol	µg/kg	400 U	400	19	NA	360 U	360	19	360 U	360	19	380 U	380	19	380 U	380	19
2,4-Dinitrophenol	µg/kg	2100 U	2100	210	NA	1900 U	1900	210	1900 U	1900	210	2100 U	2000	210	2000 U	2000	210
2,4-Dinitrotoluene	µg/kg	400 U	400	22	NA	360 U	360	22	360 U	360	22	380 U	380	22	380 U	380	22
2,6-Dinitrotoluene	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
2-Chloronaphthalene	µg/kg	400 U	400	20	NA	360 U	360	20	360 U	360	20	380 U	380	20	380 U	380	20
2-Chlorophenol	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
2-Methyl-4,6-dinitrophenol	µg/kg	2100 U	2100	170	NA	1900 U	1900	170	1900 U	1900	170	2000 U	2000	170	2000 U	2000	170
2-Methylnaphthalene	µg/kg	400 U	400	20	NA	360 U	360	20	360 U	360	20	380 U	380	20	380 U	380	20
2-Methylphenol	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
2-Nitroaniline	µg/kg	2100 U	2100	140	NA	1900 U	1900	140	1900 U	1900	140	2000 U	2000	140	2000 U	2000	140
2-Nitrophenol	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
3,3'-Dichlorobenzidine	µg/kg	790 U	790	53	NA	730 U	730	53	720 U	720	53	750 U	750	53	750 U	750	53
3-Methyl-4-chlorophenol	µg/kg	400 U	400	25	NA	360 U	360	25	360 U	360	25	380 U	380	25	380 U	380	25
3-Nitroaniline	µg/kg	2100 U	2100	280	NA	1900 U	1900	280	1900 U	1900	280	2000 U	2000	280	2000 U	2000	280
4-Bromophenyl phenyl ether	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
4-Chloroaniline	µg/kg	400 U	400	65	NA	360 U	360	65	360 U	360	65	380 U	380	65	380 U	380	65
4-Chlorophenyl phenyl ether	µg/kg	400 U	400	28	NA	360 U	360	28	360 U	360	28	380 U	380	28	380 U	380	28
4-Methylphenol	µg/kg	400 U	400	28	NA	360 U	360	25	360 U	360	25	380 U	380	26	380 U	380	26
4-Nitroaniline	µg/kg	2100 U	2100	290	NA	1900 U	1900	290	1900 U	1900	290	2000 U	2000	290	2000 U	2000	290
4-Nitrophenol	µg/kg	2100 U	2100	280	NA	1900 U	1900	280	1900 U	1900	280	2000 U	2000	280	2000 U	2000	280
Acenaphthene	µg/kg	400 U	400	24	NA	360 U	360	24	360 U	360	24	380 U	380	24	380 U	380	24
Acenaphthylene	µg/kg	400 U	400	25	NA	360 U	360	25	360 U	360	25	380 U	380	25	380 U	380	25
Aniline	µg/kg	400 U	400	25	NA	360 U	360	25	360 U	360	25	380 U	380	25	380 U	380	25
Anthracene	µg/kg	400 U	400	21	NA	360 U	360	21	360 U	360	21	380 U	380	21	380 U	380	21
Benzidine	µg/kg	2100 U	2100	530	NA	1900 U	1900	530	1900 U	1900	530	2000 U	2000	530	2000 U	2000	530
Benz[a]anthracene	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
Benzalpyrene	µg/kg	400 U	400	18	NA	360 U	360	18	360 U	360	18	380 U	380	18	380 U	380	18
Benzol[b]fluoranthene	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
Benzol[g]fluoranthene	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17
Benzol[k]fluoranthene	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380	17

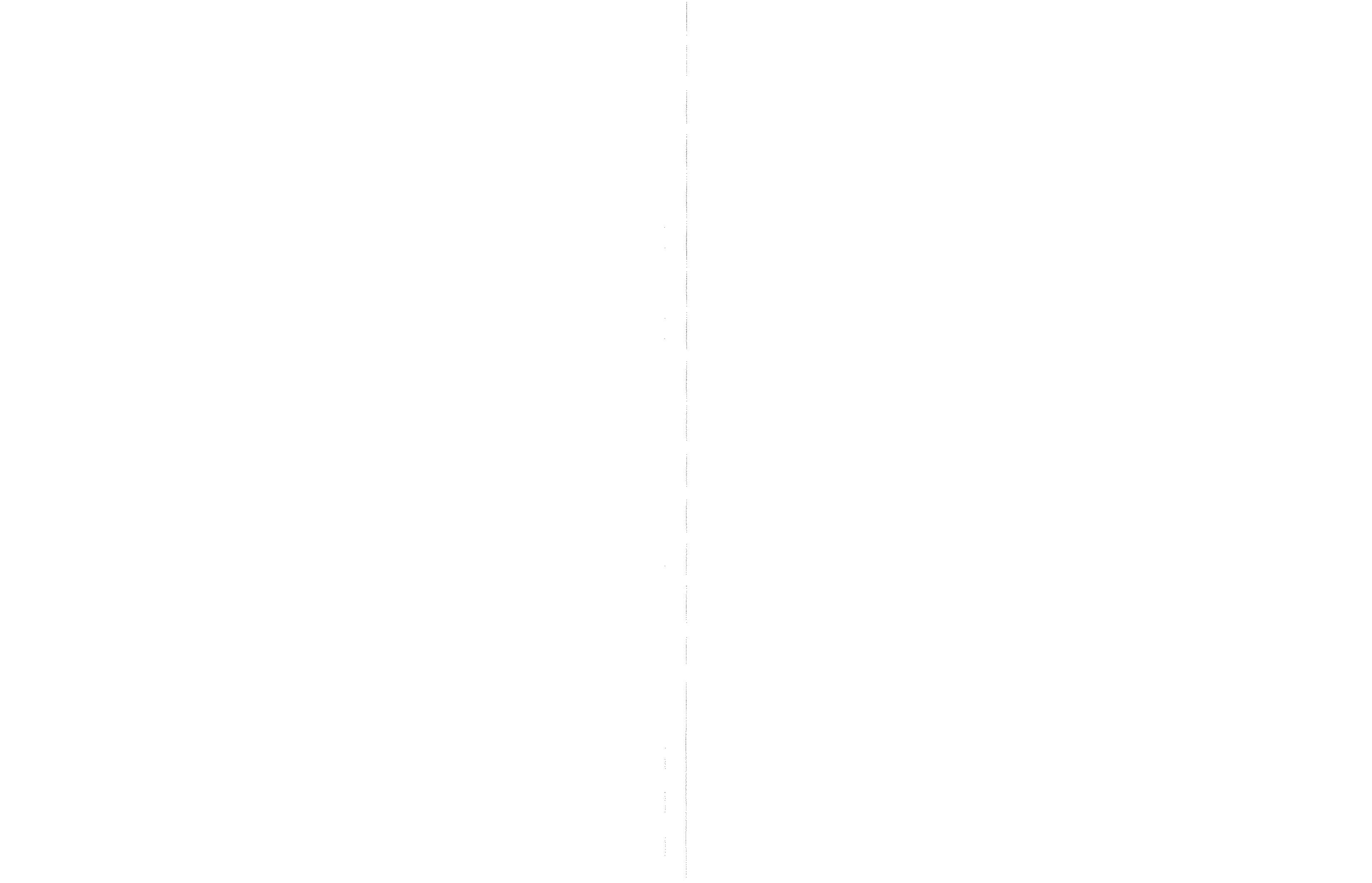


Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	Unit	17306-737			17306-738			17306-729			17306-731			17306-733		
		ST-16A-SB-01 11/22/96			ST-16A-SB-01 11/22/96			ST-16A-SB-02 11/22/96			ST-16A-SB-03 11/22/96			ST-16A-SB-04 11/22/96		
		Surface 3.0			3.0			3.0			3.0			3.0		
Benzoic acid	µg/kg	2100 U	2100	110	NA	NA	NA	1900 U	1900	110	1900 U	1900	110	2000 U	2000	110
Benzyl alcohol	µg/kg	400 U	400	26	NA	NA	NA	360 U	360	26	360 U	360	26	380 U	380	26
Bis (2-chloroethoxy)methane	µg/kg	400 U	400	20	NA	NA	NA	360 U	360	20	360 U	360	20	380 U	380	20
Bis (2-chloroethyl)ether	µg/kg	400 U	400	20	NA	NA	NA	360 U	360	20	360 U	360	20	380 U	380	20
Bis (2-chloroisopropyl)ether	µg/kg	400 U	400	19	NA	NA	NA	360 U	360	19	360 U	360	19	380 U	380	19
Bis (2-ethylhexyl)phthalate	µg/kg	120 J	400	23	NA	NA	NA	36 J	360	23	73 J	360	23	380 U	380	23
Bisphenol A	µg/kg	400 U	400	*	NA	NA	NA	360 UJ	360	*	360 UJ	360	*	380 UJ	380	*
Butyl benzyl phthalate	µg/kg	400 U	400	17	NA	NA	NA	360 U	360	17	360 U	360	17	380 U	380	17
Carbazole	µg/kg	400 U	400	130	NA	NA	NA	360 U	360	130	360 U	360	130	380 U	380	130
Chrysene	µg/kg	400 U	400	17	NA	NA	NA	360 U	360	17	360 U	360	17	380 U	380	17
Di-n-butyl phthalate	µg/kg	280 J	400	49	NA	NA	NA	360 U	360	49	360 U	360	49	380 U	380	49
Di-n-octyl phthalate	µg/kg	400 U	400	34	NA	NA	NA	360 U	360	34	360 U	360	34	380 U	380	34
Dibenz(a,h)anthracene	µg/kg	400 U	400	17	NA	NA	NA	360 U	360	17	360 U	360	17	380 U	380	17
Dibenzofuran	µg/kg	400 U	400	30	NA	NA	NA	360 U	360	30	360 U	360	30	380 U	380	30
Diethyl phthalate	µg/kg	400 U	400	28	NA	NA	NA	360 U	360	28	360 U	360	28	380 U	380	28
Dimethyl phthalate	µg/kg	400 U	400	24	NA	NA	NA	360 U	360	24	360 U	360	24	380 U	380	24
Fluoranthene	µg/kg	400 U	400	39	NA	NA	NA	360 U	360	39	360 U	360	39	380 U	380	39
Fluorene	µg/kg	400 U	400	24	NA	NA	NA	360 U	360	24	360 U	360	24	380 U	380	24
Hexachlorobenzene	µg/kg	400 U	400	17	NA	NA	NA	360 U	360	17	360 U	360	17	380 U	380	17
Hexachlorobutadiene	µg/kg	400 U	400	17	NA	NA	NA	360 U	360	17	360 U	360	17	380 U	380	17
Hexachlorocyclopentadiene	µg/kg	400 U	400	18	NA	NA	NA	360 U	360	18	360 U	360	18	380 U	380	18
Hexachloroethane	µg/kg	400 U	400	22	NA	NA	NA	360 U	360	22	360 U	360	22	380 U	380	22
Hydroquinone	µg/kg	400 U	400	*	NA	NA	NA	360 U	360	*	360 UJ	360	*	380 UJ	380	*
Indeno[1,2,3-d]pyrene	µg/kg	400 U	400	17	NA	NA	NA	360 U	360	17	360 U	360	17	380 U	380	17
Isophorone	µg/kg	400 U	400	20	NA	NA	NA	360 U	360	20	360 U	360	20	380 U	380	20
N-Nitrosodi-n-propylamine	µg/kg	400 U	400	18	NA	NA	NA	360 U	360	18	360 U	360	18	380 U	380	18

Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	Unit	17306-737			17306-738			17306-729			17306-731			17306-733		
		ST-16A-SB-01 11/22/96 Surface	ST-16A-SB-01 11/22/96 3.0	ST-16A-SB-02 11/22/96 3.0	Result Qfr RDL MDL	ST-16A-SB-03 11/22/96 3.0	ST-16A-SB-04 11/22/96 3.0	ST-16A-SB-03 11/22/96 3.0	ST-16A-SB-04 11/22/96 3.0							
N-Nitrosodiphenylamine	µg/kg	400 U	400	17	NA	360 U	360	17	360 U	360	17	380 U	380	17	380 U	380
Naphthalene	µg/kg	400 U	400	19	NA	360 U	360	19	360 U	360	19	380 U	380	19	380 U	380
Nitrobenzene	µg/kg	400 U	400	20	NA	360 U	360	20	360 U	360	20	380 U	380	20	380 U	380
Pentachlorophenol	µg/kg	400 U	400	180	NA	360 U	360	180	360 U	360	180	380 U	380	180	380 U	380
Phenanthrene	µg/kg	400 U	400	23	NA	360 U	360	23	360 U	360	23	380 U	380	23	380 U	380
Phenol	µg/kg	400 U	400	22	NA	360 U	360	22	360 U	360	22	380 U	380	22	380 U	380
Pyrene	µg/kg	400 U	400	26	NA	360 U	360	26	360 U	360	26	380 U	380	26	380 U	380
Pyridine	µg/kg	400 U	400	70	NA	360 U	360	70	360 U	360	70	380 U	380	70	380 U	380
<i>EPA 8310</i>																
Acenaphthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzofluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[a]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[b]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[g,h]perylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[k]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-c,d]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cyanide	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification	17306-734 ST-16A-SB-05 11/22/96	17306-735 (Dup) ST-16A-SB-05 11/22/96	17306-736 ST-16A-SB-05 11/22/96				
Location Code	Surface	Surface	Surface				
Date Sampled	Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
Depth (feet below ground surface)							
TPH as Diesel	mg/kg	13 U	13	2.4	12 U	12	2.4
TPH as Gasoline	mg/kg	NA	*	NA	NA	NA	NA
Unknown Hydrocarbons	mg/kg	49	13	*	77	12	*
CA LUFT 8015M							
TPH as Diesel	mg/kg	25000	63.4	3	19000	61.1	3
TPH as Gasoline	mg/kg	19 UJ	19.0	2	18 UJ	18.3	2
Unknown Hydrocarbons	mg/kg	9.9	0.63	0.5	8.9	0.61	0.5
EPA 6010							
Aluminum	mg/kg	100	12.7	0.4	150	12.2	0.4
Antimony	mg/kg	0.95 J	1.3	0.1	0.77 J	1.2	0.1
Arsenic	mg/kg	0.55	0.51	0.05	0.51	0.49	0.05
Barium	mg/kg	11000	127	10	14000	122	10
Beryllium	mg/kg	29	6.3	0.6	23	6.1	0.6
Cadmium	mg/kg	13	6.3	0.3	11	6.1	0.3
Calcium	mg/kg	33	6.3	1	27	6.1	1
Chromium	mg/kg	34000	6.3	2	29000	6.1	2
Cobalt	mg/kg	13	0.63	0.1	12	0.61	0.1
Copper	mg/kg	12000	127	5	9800	122	5
Iron	mg/kg	830	2.5	0.1	520	2.4	0.1
Lead	mg/kg	4.4 J	5.1	0.8	2.7 J	4.9	0.8
Magnesium	mg/kg	24	19.0	1	19	18.3	1
Manganese	mg/kg	5300	127	50	4000	122	50
Molybdenum	mg/kg	0.63 U	0.63	0.3	0.61 U	0.61	0.3
Nickel	mg/kg	1.3 U	1.3	0.4	1.2 U	1.2	0.4
Potassium	mg/kg	550	127	100	420	122	100
Selenium	mg/kg	8.9	8.9	0.2	8.6 U	8.6	0.2
Silver	mg/kg	13 U	12.7	0.4	12	12.2	0.4
Sodium	mg/kg	63	12.7	0.4	53	12.2	0.4
Thallium	mg/kg	100	2.5	0.8	86	2.4	0.8
Tin	mg/kg	0.037 J	0.13	0.02	0.045 J	0.12	0.02
Vanadium	mg/kg	19 U	19	0.41	18 U	18	0.41
Zinc	mg/kg	19 U	19	0.36	18 U	18	0.36
EPA 7471A							
Mercury	mg/kg	4.4-DDD	19 U	19	0.36	18 U	18
4,4-DDE	mg/kg	4.4-DDE	19 U	19	0.36	18 U	18

Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	Unit	17306-734 ST-16A-SB-05 11/22/96			17306-735 (D/up) ST-16A-SB-05 11/22/96			17306-736 ST-16A-SB-05 11/22/96			
		Surface	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
4,4'-DDT	µg/kg	19 U	19	0.42	18 U	18	0.42	NA	NA	NA	NA
Aldrin	µg/kg	95 U	95	0.17	92 U	92	0.17	NA	NA	NA	NA
alpha-BHC	µg/kg	9.5 U	9.5	0.17	9.2 U	9.2	0.17	NA	NA	NA	NA
alpha-Chlordane	µg/kg	9.5 U	9.5	0.25	9.2 U	9.2	0.25	NA	NA	NA	NA
Aroclor-1016	µg/kg	210 U	210	3.3	200 U	200	3.3	NA	NA	NA	NA
Aroclor-1221	µg/kg	210 U	210	3.3	200 U	200	3.3	NA	NA	NA	NA
Aroclor-1232	µg/kg	210 U	210	3.3	200 U	200	3.3	NA	NA	NA	NA
Aroclor-1242	µg/kg	210 U	210	3.3	200 U	200	3.3	NA	NA	NA	NA
Aroclor-1248	µg/kg	210 U	210	3.3	200 U	200	3.3	NA	NA	NA	NA
Aroclor-1254	µg/kg	210 U	210	3.3	200 U	200	3.3	NA	NA	NA	NA
Aroclor-1260	µg/kg	210 U	210	3.3	200 U	200	3.3	NA	NA	NA	NA
Beta-BHC	µg/kg	95 U	95	0.17	92 U	92	0.17	NA	NA	NA	NA
Delta-BHC	µg/kg	95 U	95	0.17	92 U	92	0.17	NA	NA	NA	NA
Dieldrin	µg/kg	19 U	19	0.33	18 U	18	0.33	NA	NA	NA	NA
Endosulfan I	µg/kg	95 U	95	0.17	92 U	92	0.17	NA	NA	NA	NA
Endosulfan II	µg/kg	19 U	19	0.33	18 U	18	0.33	NA	NA	NA	NA
Endosulfan sulfate	µg/kg	19 U	19	0.33	18 U	18	0.33	NA	NA	NA	NA
Endrin	µg/kg	19 U	19	0.33	18 U	18	0.33	NA	NA	NA	NA
Endrin aldehyde	µg/kg	19 U	19	0.33	18 U	18	0.33	NA	NA	NA	NA
gamma-BHC	µg/kg	95 U	95	0.17	92 U	92	0.17	NA	NA	NA	NA
gamma-Chlordane	µg/kg	9.5 U	9.5	0.17	9.2 U	9.2	0.17	NA	NA	NA	NA
Hepatachlor	µg/kg	13 U	13	0.23	12 U	12	0.23	NA	NA	NA	NA
Hepatachlor epoxide	µg/kg	13 U	13	0.23	12 U	12	0.23	NA	NA	NA	NA
Methoxychlor	µg/kg	95 U	95	2.3	92 U	92	2.3	NA	NA	NA	NA
Toxaphene	EPA 8260A	10000 U	*	980 U	980	*	NA	NA	NA	NA	NA
1,1,1-Trichloroethane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2	0.5	6.2
1,1,2,2-Tetrachloroethane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2	0.5	6.2
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/kg	6.3 U	6.3	6.3	6.1 U	6.1	6.1	6.2 U	6.2	6.2	6.2
1,1,2-Trichloroethane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2	0.5	6.2
1,1-Dichloroethane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2	0.5	6.2
1,1-Dichloroethene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,3-Trichloropropane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2	0.5	6.2
1,2-Dichloroethane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2	0.5	6.2
1,2-Dichloropropane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2	0.5	6.2

Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	Unit	17306-734 ST-16A-SB-05 11/22/96		17306-735 (Dup) ST-16A-SB-05 11/22/96		17306-736 ST-16A-SB-05 11/22/96			
		Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL
2-Butanone (MEK)	µg/kg	13 U	13	1	12 U	12	1	12 U	12
2-Chloroethyl vinyl ether	µg/kg	13 U	13	0.5	12 U	12	0.5	12 U	12
2-Hexanone	µg/kg	13 U	13	1	12 U	12	1	12 U	12
4-Methyl-2-pentanone (MIBK)	µg/kg	13 U	13	0.5	12 U	12	0.5	12 U	12
Acetone	µg/kg	13 U	13	4	12 U	12	4	12 U	12
Benzene	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Bromodichloromethane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Bromoform	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Bromomethane	µg/kg	6.3 U	6.3	1	6.1 U	6.1	1	6.2 U	6.2
Carbon disulfide	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Carbon tetrachloride	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Chlorobenzene	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Chloroethane	µg/kg	6.3 U	6.3	1	6.1 U	6.1	1	6.2 U	6.2
Chloroform	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Chloromethane	µg/kg	6.3 U	6.3	3	6.1 U	6.1	3	6.2 U	6.2
cis-1,2-Dichloroethene	µg/kg	6.3 U	6.3	1	6.1 U	6.1	1	6.2 U	6.2
cis-1,3-Dichloropropene	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Dibromochloromethane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Dichlorodifluoromethane	µg/kg	6.3 U	6.3	6.3	6.1 U	6.1	6.1	6.2 U	6.2
Ethylbenzene	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Methyl tert-butyl ether (MTBE)	µg/kg	NA			NA			NA	
Methylene chloride	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Styrene	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Tetrachloroethene	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Toluene	µg/kg	6.3 U	6.3	0.97	6.1 U	6.1	0.97	6.2 U	6.2
trans-1,2-Dichloroethene	µg/kg	6.3 U	6.3	0.63	6.1 U	6.1	0.61	6.2 U	6.2
trans-1,3-Dichloropropene	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Trichloroethene	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Trichlorofluoromethane	µg/kg	6.3 U	6.3	0.5	6.1 U	6.1	0.5	6.2 U	6.2
Vinyl acetate	µg/kg	13 U	13	2	12 U	12	2	12 U	12
Vinyl chloride	µg/kg	6.3 U	6.3	2	6.1 U	6.1	2	6.2 U	6.2
Xylenes (total)	µg/kg	6.3 U	6.3	1.4	6.1 U	6.1	1.4	6.2 U	6.2
	EPA 8270								
1,2,4-Trichlorobenzene	µg/kg	380 U	380	23	370 U	370	23	NA	NA
1,2-Dichlorobenzene	µg/kg	380 U	380	22	370 U	370	22	NA	NA

Table A-1
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	Unit	17306-734			17306-735 (Dup)			17306-736		
		ST-16A-SB-05 11/22/96	Surface	ST-16A-SB-05 11/22/96	Surface	ST-16A-SB-05 11/22/96	Surface	ST-16A-SB-05 11/22/96	Surface	ST-16A-SB-05 11/22/96
N-Nitrosodiphenylamine	µg/kg	380 U	380	17	370 U	370	17	NA	NA	NA
Naphthalene	µg/kg	380 U	380	19	370 U	370	19	NA	NA	NA
Nitrobenzene	µg/kg	380 U	380	20	370 U	370	20	NA	NA	NA
Pentachlorphenol	µg/kg	380 U	380	180	370 U	370	180	NA	NA	NA
Phenanthrene	µg/kg	380 U	380	23	370 U	370	23	NA	NA	NA
Phenol	µg/kg	380 U	380	22	370 U	370	22	NA	NA	NA
Pyrene	µg/kg	380 U	380	26	43 J	370	26	NA	NA	NA
Pyridine	µg/kg	380 UJ	380	70	370 UJ	370	70	NA	NA	NA
<i>EPA 8310</i>										
Acenaphthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz[a]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz[a]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz[b]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz[g]perylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz[k]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-e]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>EPA 9010</i>										
Cyanide	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Qfl = qualifier

RDL = reportable detection limit

MDL = method detection limit

µg/kg = micrograms per kilogram

UJ = indicates the analyte was not detected at or above the stated limit. The sample detection limit is an estimated value.

J = indicates an estimated value.

U = indicates the analyte was not detected at or above the stated limit.



Table A-1 (contd')
Analytical Results of Initial Soil Investigation of 1996 - Site ST-16A, MCAS Tustin

Summary of Benzo(a)pyrene Equivalent Concentrations for the Initial Soil Investigation of 1996 Soil Samples

Sample ID	Location ID	Initial Soil Borings Before Removal Action of 1996 (feet below ground surface)	Depths of sample Collection	Total B(a)P Equivalents ($\mu\text{g}/\text{kg}$)
				Total B(a)P Equivalents ($\mu\text{g}/\text{kg}$)
17306-729	ST-16A-SB-02		3	0
17306-731	ST-16A-SB-03		3	0
17306-733	ST-16A-SB-04		3	0
17306-734	ST-16A-SB-05	Surface	-	0
17306-735	ST-16A-SB-05	Surface	-	0
17306-736	ST-16A-SB-05	-	-	-
17306-737	ST-16A-SB-01	Surface	-	0
17306-738	ST-16A-SB-01	-	-	-

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	Location Code	17306-1000 ST-16A-SW-05 04/14/97				17306-1001 ST-16A-SW-06 04/14/97				17306-1002 ST-16A-SW-07 04/14/97				17306-1003 ST-16A-SW-08 04/14/97				17306-1004 ST-16A-SW-09 04/14/97			
		Unit	Result Qifr	RDL	MDL	Result Qifr	RDL	MDL	Result Qifr	RDL	MDL	Result Qifr	RDL	MDL	Result Qifr	RDL	MDL	Result Qifr	RDL	MDL	
<i>EP4 8270</i>																					
1,2,4-Trichlorobenzene	µg/kg	330 U	25	340 U	26	330 U	25	330	25	310 U	24	340 U	24	340	24	340	24	340 U	26		
1,2-Dichlorobenzene	µg/kg	330 U	24	340 U	25	330 U	24	330	24	310 U	23	340 U	23	340	23	340	23	340 U	25		
1,3-Dichlorobenzene	µg/kg	330 U	19	340 U	19	330 U	19	330	19	310 U	18	340 U	18	340	18	340	18	340 U	19		
1,4-Dichlorobenzene	µg/kg	330 U	23	340 U	24	330 U	23	330	23	310 U	22	340 U	22	340	22	340	22	340 U	24		
2,4,5-Trichlorophenol	µg/kg	1800 U	25	1800 U	26	1800 U	25	1800	25	1700 U	24	1800 U	24	1800	24	1800	24	1800 U	26		
2,4,6-Trichlorophenol	µg/kg	330 U	21	340 U	21	330 U	21	330	21	310 U	20	340 U	20	340	20	340	20	340 U	21		
2,4-Dichlorophenol	µg/kg	330 U	19	340 U	19	330 U	19	330	19	310 U	18	340 U	18	340	18	340	18	340 U	19		
2,4-Dimethylphenol	µg/kg	330 U	21	340 U	21	330 U	21	330	21	310 U	20	340 U	20	340	20	340	20	340 U	21		
2,4-Dinitrophenol	µg/kg	1800 U	230	1800 U	240	1800 U	230	1800	230	1700 U	220	1800 U	220	1800	220	1800	220	1800 U	240		
2,4-Dinitrotoluene	µg/kg	330 U	24	340 U	25	330 U	24	330	24	310 U	23	340 U	23	340	23	340	23	340 U	25		
2-Chloronaphthalene	µg/kg	330 U	19	340 U	19	330 U	19	330	19	310 U	18	340 U	18	340	18	340	18	340 U	19		
2-Chlorophenol	µg/kg	330 U	19	340 U	19	330 U	19	330	19	310 U	18	340 U	18	340	18	340	18	340 U	19		
2-Methyl-4,6-dinitrophenol	µg/kg	1800 U	190	1800 U	190	1800 U	190	1800	190	1700 U	180	1800 U	180	1800	180	1800	180	1800 U	190		
2-Methyl-naphthalene	µg/kg	330 U	22	340 U	23	330 U	22	330	22	310 U	21	340 U	21	340	21	340	21	340 U	22		
2-Methylphenol	µg/kg	330 U	19	340 U	19	330 U	19	330	19	310 U	18	340 U	18	340	18	340	18	340 U	19		
2-Nitroaniline	µg/kg	1800 U	150	1800 U	160	1800 U	160	1800	160	1700 U	140	1800 U	140	1800	140	1800	140	1800 U	160		
2-Nitrophenol	µg/kg	330 U	19	340 U	19	330 U	19	330	19	310 U	18	340 U	18	340	18	340	18	340 U	19		
3,3-Dichlorobenzidine	µg/kg	660 U	58	680 U	60	660 U	60	660	60	620 U	55	670 U	55	670	55	670	55	670 U	59		
3-Methyl-4-chlorophenol	µg/kg	330 U	27	340 U	28	330 U	28	330	28	310 U	18	340 U	18	340	18	340	18	340 U	19		
3-Nitroaniline	µg/kg	1800 U	310	1800 U	320	1800 U	320	1800	320	1700 U	1700	1800 U	1700	1800	1700	1800	1700	1800 U	1800		
4-Bromophenyl ether	µg/kg	330 U	19	340 U	19	330 U	19	330	19	310 U	18	340 U	18	340	18	340	18	340 U	19		
4-Chlorophenyl phenyl ether	µg/kg	330 U	71	340 U	74	330 U	72	330	72	310 U	67	340 U	67	340	67	340	67	340 U	73		
4-Methylphenyl phenyl ether	µg/kg	330 U	31	340 U	32	330 U	32	330	32	310 U	29	340 U	29	340	29	340	29	340 U	31		
4-Nitroaniline	µg/kg	330 U	23	340 U	24	330 U	24	330	23	310 U	22	340 U	22	340	22	340	22	340 U	24		
4-Nitrophenol	µg/kg	1800 U	320	1800 U	330	1800 U	330	1800	330	1700 U	1700	1800 U	1700	1800	1700	1800	1700	1800 U	1800		
Acenaphthene	µg/kg	1800 U	310	1800 U	320	1800 U	320	1800	320	1700 U	1700	1800 U	1700	1800	1700	1800	1700	1800 U	1800		
Acenaphthyene	µg/kg	330 U	23	340 U	24	330 U	24	330	23	310 U	22	340 U	22	340	22	340	22	340 U	24		
Aniline	µg/kg	330 U	27	340 U	28	330 U	28	330	28	310 U	26	340 U	26	340	26	340	26	340 U	28		
Anthracene	µg/kg	330 U	23	340 U	24	330 U	24	330	23	310 U	22	340 U	22	340	22	340	22	340 U	24		
Benzidine	µg/kg	1800 U	580	1800 U	600	1800 U	600	1800	600	1700 U	1700	1800 U	1700	1800	1700	1800	1700	1800 U	1800		
Benzof[a]anthracene	µg/kg	130 J	19	64 J	20	340 J	19	30 J	19	310 U	18	170 J	19	170	18	170	19	170 U	19		
Benz[a]pyrene	µg/kg	230 J	20	120 J	20	340 J	20	50 J	20	330 U	19	340 J	19	340	19	340	19	340 U	20		

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	17306-1000 ST-16A-SW-05 04/14/97				17306-1001 ST-16A-SW-06 04/14/97				17306-1002 ST-16A-SW-07 04/14/97				17306-1003 ST-16A-SW-08 04/14/97			
				Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
Benzol[b]fluoranthene	$\mu\text{g}/\text{kg}$	590	330	19	340	340	19	140 J	330	19	120 J	310	18	920	340	19	340	340	19
Benzol[ghi]perylene	$\mu\text{g}/\text{kg}$	200 J	330	19	110 J	340	19	50 J	330	19	36 J	310	18	310 J	340	19	340	340	19
Benzol[k]fluoranthene	$\mu\text{g}/\text{kg}$	330 U	330	19	340 U	340	19	330 U	330	19	310 U	310	18	340 U	340	19	340	340	19
Benzol acid	$\mu\text{g}/\text{kg}$	1800 U	120	1800 U	1800	120	1800 U	1800	120	1700 U	1700	110	1800 U	1800	120	1800 U	1800	120	
Benzyl alcohol	$\mu\text{g}/\text{kg}$	330 U	29	340 U	340	29	330 U	330	29	310 U	310	27	340 U	340	29	340 U	340	29	
Bis (2-chloroethoxy)methane	$\mu\text{g}/\text{kg}$	330 U	22	340 U	340	23	330 U	330	22	310 U	310	21	340 U	340	22	340 U	340	22	
Bis (2-chloroethyl)ether	$\mu\text{g}/\text{kg}$	330 U	22	340 U	340	23	330 U	330	22	310 U	310	21	340 U	340	22	340 U	340	22	
Bis (2-chloroisopropyl)ether	$\mu\text{g}/\text{kg}$	330 U	21	340 U	340	21	330 U	330	21	310 U	310	20	340 U	340	21	340 U	340	21	
Bis (2-ethylhexyl)phthalate	$\mu\text{g}/\text{kg}$	330 J	25	38 J	340	26	28 J	330	25	37 J	310	24	68 J	340	26	340 UJ	340	26	
Bisphenol A	$\mu\text{g}/\text{kg}$	330 UJ	330	340 UJ	340	340	330 UJ	330	330	310 UJ	310	310	340 UJ	340	340	340 UJ	340	340	
Butyl benzyl phthalate	$\mu\text{g}/\text{kg}$	330 U	19	44 J	340	19	330 U	330	19	310 U	310	18	340 U	340	19	340 U	340	19	
Carbazole	$\mu\text{g}/\text{kg}$	330 U	140	340 U	340	150	330 U	330	140	310 U	310	130	340 U	340	150	340 U	340	150	
Chrysene	$\mu\text{g}/\text{kg}$	230 J	330	19	120 J	340	19	53 J	330	19	43 J	310	18	360	340	19	360	340	19
Di-n-butyl phthalate	$\mu\text{g}/\text{kg}$	330 U	54	340 U	340	55	330 U	330	54	310 U	310	51	340 U	340	55	340 U	340	55	
Di-n-octyl phthalate	$\mu\text{g}/\text{kg}$	330 U	37	340 U	340	38	330 U	330	37	310 U	310	35	340 U	340	38	340 U	340	38	
Dibenz[a,h]anthracene	$\mu\text{g}/\text{kg}$	38 J	330	19	32 J	340	19	330 U	330	19	310 U	310	18	91 J	340	19	340 U	340	19
Dibenzofuran	$\mu\text{g}/\text{kg}$	330 U	33	340 U	340	34	330 U	330	33	310 U	310	31	340 U	340	34	340 U	340	34	
Diethyl phthalate	$\mu\text{g}/\text{kg}$	330 U	31	340 U	340	32	330 U	330	31	310 U	310	29	340 U	340	31	340 U	340	31	
Dimethyl phthalate	$\mu\text{g}/\text{kg}$	330 U	26	340 U	340	27	330 U	330	26	310 U	310	25	340 U	340	27	340 U	340	27	
Fluoranthene	$\mu\text{g}/\text{kg}$	250 J	330	43	140 J	340	44	53 J	330	43	42 J	310	40	340	340	44	340	340	44
Fluorene	$\mu\text{g}/\text{kg}$	330 U	26	340 U	340	27	330 U	330	26	310 U	310	25	340 U	340	27	340 U	340	27	
Hexachlorobenzene	$\mu\text{g}/\text{kg}$	330 U	19	340 U	340	19	330 U	330	19	310 U	310	18	340 U	340	19	340 U	340	19	
Hexachlorobutadiene	$\mu\text{g}/\text{kg}$	330 U	19	340 U	340	19	330 U	330	19	310 U	310	18	340 U	340	19	340 U	340	19	
Hexachlorocyclopentadiene	$\mu\text{g}/\text{kg}$	330 U	20	340 U	340	20	330 U	330	20	310 U	310	19	340 U	340	20	340 U	340	20	
Hexachloroethane	$\mu\text{g}/\text{kg}$	330 U	24	340 U	340	25	330 U	330	24	310 U	310	23	340 U	340	25	340 U	340	25	
Hydroquinone	$\mu\text{g}/\text{kg}$	330 U	340 UJ	340	340	340	330 U	330	340	310 UJ	310	310	340 UJ	340	340	340 UJ	340	340	
Indenol[1,2,3-cd]pyrene	$\mu\text{g}/\text{kg}$	190 J	330	19	96 J	340	19	45 J	330	19	32 J	310	18	290 J	340	19	340 U	340	19
Isophorone	$\mu\text{g}/\text{kg}$	330 U	22	340 U	340	23	330 U	330	22	310 U	310	21	340 U	340	22	340 U	340	22	
N-Nitrosodi-n-propylamine	$\mu\text{g}/\text{kg}$	330 U	20	340 U	340	20	330 U	330	20	310 U	310	19	340 U	340	20	340 U	340	20	
N-Nitrosodiphenylamine	$\mu\text{g}/\text{kg}$	330 U	19	340 U	340	19	330 U	330	19	310 U	310	18	340 U	340	19	340 U	340	19	
Naphthalene	$\mu\text{g}/\text{kg}$	330 U	21	340 U	340	21	330 U	330	21	310 U	310	20	340 U	340	21	340 U	340	21	
Nitrobenzene	$\mu\text{g}/\text{kg}$	330 U	22	340 U	340	23	330 U	330	22	310 U	310	21	340 U	340	22	340 U	340	22	
Pentachlorophenol	$\mu\text{g}/\text{kg}$	330 U	200	340 U	340	200	330 U	330	200	310 U	310	190	340 U	340	200	340 U	340	200	
Phenanthrene	$\mu\text{g}/\text{kg}$	76 J	330	25	35 J	340	26	330 U	330	25	310 U	310	24	97 J	340	26	340 U	340	26
Pheno	$\mu\text{g}/\text{kg}$	330 U	24	340 U	340	25	330 U	330	24	310 U	310	23	340 U	340	25	340 U	340	25	

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	17306-1000 ST-16A-SW-05 04/14/97 1.0			17306-1001 ST-16A-SW-06 04/14/97 0.5			17306-1002 ST-16A-SW-07 04/14/97 0.5			17306-1003 ST-16A-SW-08 04/14/97 1.0			17306-1004 ST-16A-SW-09 04/14/97 0.5		
Location Code	Result Qfr	RDL	MDL												
Date Sampled	Unit	µg/kg	µg/kg												
Pyrene	J	240	330	J	29	110	J	29	47	J	330	29	J	310	27
Pyridine	U	330	330	U	77	340	U	79	330	U	330	77	U	310	72

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	Location Code	17306-1005				17306-1006 (Dup)				17306-1007				17306-1008				17306-1009			
		ST-16A-SW-10 04/14/97 0.5		ST-16A-SW-11 04/14/97 0.5		ST-16A-BF-01 04/14/97 0.5		ST-16A-BF-02 04/14/97 0.5		ST-16A-BF-03 04/14/97 0.5		ST-16A-BF-04 04/14/97 0.5		ST-16A-BF-05 04/14/97 0.5		ST-16A-BF-06 04/14/97 0.5		ST-16A-BF-07 04/14/97 0.5			
Unit	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL			
EPA 8270																					
1,2,4-Trichlorobenzene	µg/kg	330 U	330	26	320 U	320	24	320 U	320	24	310 U	310	24	310 U	310	24	310 U	310	23		
1,2-Dichlorobenzene	µg/kg	330 U	330	24	320 U	320	23	320 U	320	23	310 U	310	23	310 U	310	23	310 U	310	22		
1,3-Dichlorobenzene	µg/kg	330 U	330	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	18	310 U	310	17		
1,4-Dichlorobenzene	µg/kg	330 U	330	23	320 U	320	22	320 U	320	22	310 U	310	22	310 U	310	22	310 U	310	21		
2,4,5-Trichlorophenol	µg/kg	1800 U	1800	26	1700 U	1700	24	1700 U	1700	24	1700 U	1700	24	1600 U	1600	24	1600 U	1600	23		
2,4,6-Trichlorophenol	µg/kg	330 U	330	21	320 U	320	20	320 U	320	20	310 U	310	20	310 U	310	20	310 U	310	19		
2,4-Dichlorophenol	µg/kg	330 U	330	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	18	310 U	310	17		
2,4-Dimethylphenol	µg/kg	1800 U	1800	230	1700 U	1700	220	1700 U	1700	220	1700 U	1700	220	1700 U	1700	220	1600 U	1600	210		
2,4-Dinitrophenol	µg/kg	330 U	330	24	320 U	320	23	320 U	320	23	310 U	310	23	310 U	310	23	310 U	310	22		
2,4-Dinitrotoluene	µg/kg	330 U	330	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	18	310 U	310	17		
2,6-Dinitrotoluene	µg/kg	330 U	330	22	320 U	320	21	320 U	320	21	310 U	310	21	310 U	310	21	310 U	310	20		
2-Chloronaphthalene	µg/kg	330 U	330	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	18	310 U	310	17		
2-Chlorophenol	µg/kg	1800 U	1800	190	1700 U	1700	180	1700 U	1700	180	1700 U	1700	180	1700 U	1700	180	1600 U	1600	170		
2-Methyl-4,6-dinitrophenol	µg/kg	330 U	330	22	320 U	320	21	320 U	320	21	310 U	310	21	310 U	310	21	310 U	310	20		
2-Methylnaphthalene	µg/kg	330 U	330	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	18	310 U	310	17		
2-Methylphenol	µg/kg	1800 U	1800	160	1700 U	1700	150	1700 U	1700	150	1700 U	1700	150	1700 U	1700	150	1600 U	1600	140		
2-Nitroaniline	µg/kg	330 U	330	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	18	310 U	310	17		
2-Nitrophenol	µg/kg	670 U	670	59	640 U	640	56	640 U	640	56	620 U	620	55	610 U	610	55	610 U	610	54		
3,3-Dichlorobenzidine	µg/kg	330 U	330	28	320 U	320	27	320 U	320	27	310 U	310	27	310 U	310	27	310 U	310	25		
3-Methyl-4-chlorophenol	µg/kg	1800 U	1800	310	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	1600 U	1600	280		
3-Nitroaniline	µg/kg	330 U	330	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	18	310 U	310	17		
4-Bromophenyl phenyl ether	µg/kg	330 U	330	72	320 U	320	69	320 U	320	69	310 U	310	67	310 U	310	67	310 U	310	66		
4-Chloroaniline	µg/kg	330 U	330	31	320 U	320	30	320 U	320	30	310 U	310	29	310 U	310	29	310 U	310	28		
4-Chlorophenyl phenyl ether	µg/kg	330 U	330	23	320 U	320	22	320 U	320	22	310 U	310	22	310 U	310	22	310 U	310	21		
4-Methylphenol	µg/kg	1800 U	1800	320	1700 U	1700	310	1700 U	1700	310	1700 U	1700	300	1700 U	1700	300	1600 U	1600	300		
4-Nitroaniline	µg/kg	1800 U	1800	310	1700 U	1700	300	1700 U	1700	300	1700 U	1700	290	1600 U	1600	290	1600 U	1600	280		
4-Nitrophenol	µg/kg	330 U	330	23	320 U	320	22	320 U	320	22	310 U	310	22	310 U	310	22	310 U	310	21		
Acenaphthene	µg/kg	330 U	330	28	320 U	320	27	320 U	320	27	310 U	310	26	310 U	310	26	310 U	310	25		
Acenaphthylene	µg/kg	330 U	330	28	320 U	320	27	320 U	320	27	310 U	310	26	310 U	310	26	310 U	310	25		
Aniline	µg/kg	330 U	330	23	320 J	320	22	320 J	320	22	310 U	310	22	310 U	310	22	310 U	310	21		
Anthracene	µg/kg	1800 U	1800	590	1700 U	1700	560	1700 U	1700	560	1700 U	1700	550	1700 U	1700	550	1600 U	1600	540		
Benzidine	µg/kg	71 J	330	19	210 J	320	18	290 J	320	18	310 U	310	18	310 U	310	18	120 J	310	17		
Benzolanthracene	µg/kg	130 J	330	20	390	320	19	550	320	19	310	310	19	230 J	310	19	230 J	310	18		

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	Location Code	17306-1005 ST-16A-SW-10 04/14/97			17306-1006 (Dup) ST-16A-SW-11 04/14/97			17306-1007 ST-16A-BF-01 04/14/97			17306-1008 ST-16A-BF-02 04/14/97			17306-1009 ST-16A-BF-03 04/14/97		
		Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL
Benzol[b]fluoranthene	$\mu\text{g}/\text{kg}$	4.40	330	19	960	320	18	1300	320	18	1300	320	18	650	310	17
Benzol[phi]lpercylene	$\mu\text{g}/\text{kg}$	130 J	330	19	230 J	320	18	330	320	18	21 J	310	18	210 J	310	17
Benzol[k]fluoranthene	$\mu\text{g}/\text{kg}$	330 U	330	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	17
Benzoic acid	$\mu\text{g}/\text{kg}$	1800 U	1800	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	110	1600 U	1600	110
Benzyl alcohol	$\mu\text{g}/\text{kg}$	330 U	29	320 U	320	28	320 U	320	28	310 U	310	27	310 U	310	26	
Bis (2-chloroethoxy)methane	$\mu\text{g}/\text{kg}$	330 U	22	320 U	320	21	320 U	320	21	310 U	310	21	310 U	310	20	
Bis (2-chloroethyl)ether	$\mu\text{g}/\text{kg}$	330 U	22	320 U	320	21	320 U	320	21	310 U	310	21	310 U	310	20	
Bis (2-chloropropoxy)ether	$\mu\text{g}/\text{kg}$	330 U	21	320 U	320	20	320 U	320	20	310 U	310	20	310 U	310	19	
Bis (2-ethylhexyl)phthalate	$\mu\text{g}/\text{kg}$	37 J	330	26	62 J	320	24	87 J	320	24	310 U	310	24	37 J	310	23
Bisphenol A	$\mu\text{g}/\text{kg}$	330 UJ	330	30	320 UJ	320	30	320 UJ	320	30	310 UJ	310	30	310 UJ	310	30
Butyl benzyl phthalate	$\mu\text{g}/\text{kg}$	20 J	330	19	19 J	320	18	27 J	320	18	310 U	310	18	57 J	310	17
Carbazole	$\mu\text{g}/\text{kg}$	330 U	330	140	320 U	320	140	320 U	320	140	310 U	310	130	310 U	310	130
Chrysene	$\mu\text{g}/\text{kg}$	160 J	330	19	400	320	18	560	320	18	29 J	310	18	240 J	310	17
Di-n-butyl phthalate	$\mu\text{g}/\text{kg}$	330 U	330	54	320 U	320	52	320 U	320	52	310 U	310	51	310 U	310	50
Di-n-octyl phthalate	$\mu\text{g}/\text{kg}$	330 U	330	38	320 U	320	36	320 U	320	36	310 U	310	35	310 U	310	35
Dibenz[a,h]anthracene	$\mu\text{g}/\text{kg}$	34 J	330	19	77 J	320	18	110 J	320	18	310 U	310	18	61 J	310	17
Dibenzofuran	$\mu\text{g}/\text{kg}$	330 U	330	33	320 U	320	32	320 U	320	32	310 U	310	31	310 U	310	31
Diethyl phthalate	$\mu\text{g}/\text{kg}$	330 U	330	31	320 U	320	30	320 U	320	30	310 U	310	29	310 U	310	28
Dimethyl phthalate	$\mu\text{g}/\text{kg}$	330 U	330	27	320 U	320	26	320 U	320	26	310 U	310	25	310 U	310	24
Fluoranthene	$\mu\text{g}/\text{kg}$	130 J	330	43	500	320	42	700	320	41	310 U	310	40	210 J	310	40
Fluorene	$\mu\text{g}/\text{kg}$	330 U	330	33	320 U	320	32	320 U	320	32	310 U	310	31	310 U	310	31
Hexachlorobenzene	$\mu\text{g}/\text{kg}$	330 U	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	17	
Hexachlorobutadiene	$\mu\text{g}/\text{kg}$	330 U	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	17	
Hexachlorocyclopentadiene	$\mu\text{g}/\text{kg}$	330 U	20	320 U	320	19	320 U	320	19	310 U	310	19	310 U	310	18	
Hexachloroethane	$\mu\text{g}/\text{kg}$	330 U	24	320 U	320	23	320 U	320	23	310 U	310	23	310 U	310	22	
Hydroquinone	$\mu\text{g}/\text{kg}$	330 UJ	330	320 U	320	320 U	320	320 U	320	320 U	310 U	310	310 UJ	310	310	
Indeno[1,2,3-cd]pyrene	$\mu\text{g}/\text{kg}$	120 J	330	19	230 J	320	18	330	320	18	20 J	310	18	200 J	310	17
Isophorone	$\mu\text{g}/\text{kg}$	330 U	330	22	320 U	320	21	320 U	320	21	310 U	310	21	310 U	310	20
N-Nitrosodi-n-propylamine	$\mu\text{g}/\text{kg}$	330 U	20	320 U	320	19	320 U	320	19	310 U	310	19	310 U	310	18	
N-Nitrosodiphenylamine	$\mu\text{g}/\text{kg}$	330 U	19	320 U	320	18	320 U	320	18	310 U	310	18	310 U	310	17	
Naphthalene	$\mu\text{g}/\text{kg}$	330 U	21	320 U	320	20	320 U	320	20	310 U	310	20	310 U	310	19	
Nitrobenzene	$\mu\text{g}/\text{kg}$	330 U	22	320 U	320	21	320 U	320	21	310 U	310	21	310 U	310	20	
Pentachlorophenol	$\mu\text{g}/\text{kg}$	330 U	200	320 U	320	190	320 U	320	190	310 U	310	190	310 U	310	180	
Phenanthrene	$\mu\text{g}/\text{kg}$	36 J	330	26	180 J	320	24	230 J	320	24	310 U	310	24	62 J	310	23
Phenoil	$\mu\text{g}/\text{kg}$	330 U	24	320 U	320	23	320 U	320	23	310 U	310	23	310 U	310	22	

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	17306-1005			17306-1006 (Dup)			17306-1007			17306-1008			17306-1009			
Location Code	ST-16A-SW-10 04/14/97 0.5			ST-16A-SW-11 04/14/97 0.5			ST-16A-BF-01 04/14/97 0.5			ST-16A-BF-02 04/14/97 0.5			ST-16A-BF-03 04/14/97 0.5			
Date Sampled																
Depth (feet below ground surface)																
Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	
Pyrene	µg/kg	140 J 330 U	330 330	29 78	500 320 U	320 320	28 75	710 320 U	320 320	28 74	27 J 310 U	310 310	27 72	220 J 310 U	310 310	26 71
Pyridine	µg/kg	330 U														

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	17306-996				17306-997				17306-998				17306-999				17306-1173				
				ST-16A-SW-01 04/14/97 1.0	RDL	MDL	Result Qfr	ST-16A-SW-02 04/14/97 0.5	RDL	MDL	Result Qfr	ST-16A-SW-03 04/14/97 0.5	RDL	MDL	Result Qfr	ST-16A-SW-04 04/14/97 0.5	RDL	MDL	Result Qfr	ST-16A-SB-11 6/25/1997	RDL	MDL		
EP4-8270																								
1,2,4-Trichlorobenzene	µg/kg	350 U	350	26	330 U	330	25	320 U	320	25	320 U	320	25	320 U	320	24	320 U	320	23	320 U	320	23	320 U	320
1,2-Dichlorobenzene	µg/kg	350 U	350	25	330 U	330	24	320 U	320	24	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
1,3-Dichlorobenzene	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	23	320 U	320	23	320 U	320	23	320 U	320	22	320 U	320
1,4-Dichlorobenzene	µg/kg	350 U	350	24	330 U	330	23	320 U	320	23	320 U	320	25	320 U	320	25	320 U	320	25	320 U	320	24	320 U	320
2,4,5-Trichlorophenol	µg/kg	1800 U	1800	26	1800 U	1800	25	1700 U	1700	25	1700 U	1700	25	1700 U	1700	25	1700 U	1700	24	1700 U	1700	24	1700 U	1700
2,4,6-Trichlorophenol	µg/kg	350 U	350	22	330 U	330	21	320 U	320	21	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
2,4-Dichlorophenol	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
2,4-Dimethylphenol	µg/kg	350 U	350	22	330 U	330	21	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320
2,4-Dinitrophenol	µg/kg	1800 U	240	1800 U	1800	230	1700 U	1700	230	1700 U	1700	230	1700 U	1700	230	1700 U	1700	220	1700 U	1700	220	1700 U	1700	
2,4-Dinitrotoluene	µg/kg	350 U	350	25	330 U	330	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	23	320 U	320	23	320 U	320
2,6-Dinitrotoluene	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
2-Chloronaphthalene	µg/kg	350 U	350	23	330 U	330	22	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320
2-Chlorophenol	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
2-Methyl-4,6-dinitrophenol	µg/kg	1800 U	200	1800 U	1800	190	1700 U	1700	190	1700 U	1700	180	1700 U	1700	180	1700 U	1700	180	1700 U	1700	180	1700 U	1700	
2-Methylnaphthalene	µg/kg	350 U	350	23	330 U	330	22	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320
2-Methylphenol	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
2-Nitroaniline	µg/kg	1800 U	160	1800 U	1800	150	1700 U	1700	150	1700 U	1700	150	1700 U	1700	150	1700 U	1700	150	1700 U	1700	150	1700 U	1700	
2-Nitrophenol	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
3,3-Dichlorobenzidine	µg/kg	690 U	690	61	660 U	660	59	640 U	640	57	630 U	630	56	630 U	630	56	630 U	630	56	630 U	630	56	630 U	630
3-Methyl-4-chlorophenol	µg/kg	350 U	350	29	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
3-Nitroaniline	µg/kg	1800 U	320	1800 U	1800	310	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	1700 U	1700	
4-Bromophenyl phenyl ether	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320
4-Chloroaniline	µg/kg	350 U	350	75	330 U	330	72	320 U	320	70	320 U	320	70	320 U	320	70	320 U	320	68	320 U	320	68	320 U	320
4-Chlorophenyl phenyl ether	µg/kg	350 U	350	32	330 U	330	28	320 U	320	27	320 U	320	27	320 U	320	27	320 U	320	26	320 U	320	26	320 U	320
4-Methylphenol	µg/kg	350 U	350	24	330 U	330	23	320 U	320	23	320 U	320	23	320 U	320	23	320 U	320	23	320 U	320	22	320 U	320
4-Nitroaniline	µg/kg	1800 U	330	1800 U	1800	320	1700 U	1700	310	1700 U	1700	310	1700 U	1700	310	1700 U	1700	310	1700 U	1700	310	1700 U	1700	
4-Nitrophenol	µg/kg	350 U	350	24	330 U	330	23	320 U	320	22	320 U	320	22	320 U	320	22	320 U	320	22	320 U	320	22	320 U	320
Acenaphthene	µg/kg	350 U	350	29	330 U	330	28	320 U	320	27	320 U	320	27	320 U	320	27	320 U	320	26	320 U	320	26	320 U	320
Acenaphthylene	µg/kg	350 U	350	29	330 U	330	28	320 U	320	27	320 U	320	27	320 U	320	27	320 U	320	26	320 U	320	26	320 U	320
Aniline	µg/kg	350 U	350	24	31 J	330	23	320 J	320	23	320 J	320	23	320 J	320	23	320 J	320	22	320 J	320	22	320 J	320
Anthracene	µg/kg	1800 U	610	1800 U	1800	590	1700 U	1700	570	1700 U	1700	570	1700 U	1700	570	1700 U	1700	560	1700 U	1700	560	1700 U	1700	
Benzidine	µg/kg	350 U	350	20	190 J	330	19	460 J	320	18	96 J	320	18	96 J	320	18	96 J	320	18	100 J	320	19	100 J	320
Benzofluoranthene	µg/kg	21 J	350	21	300 J	330	20	790	320	19	170 J	320	19	170 J	320	19	170 J	320	19	190 J	320	19	190 J	320

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	ST-16A-SW-01 04/14/97				ST-16A-SW-02 04/14/97				ST-16A-SW-03 04/14/97				ST-16A-SW-04 04/14/97				ST-16A-SB-11 6/25/1997				17306-998 04/14/97				17306-999 04/14/97				
				Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL				
Benzothiophene	µg/kg	43 J	330	20	830	330	19	2100	320	18	510	320	18	18	320	18	18	320	18	18	320	18	18	320	18	18	320	18	18	320		
Benzof[b]perylene	µg/kg	350 U	350	20	310 J	330	19	690	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J
Benzofluroanthene	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U			
Benzoic acid	µg/kg	1800 U	1800	130	1800 U	1800	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1700 U			
Benzyl alcohol	µg/kg	350 U	350	30	330 U	330	29	320 U	320	28	320 U	320	28	320 U	320	28	320 U	320	28	320 U	320	28	320 U	320	28	320 U	320	28	320 U			
Bis (2-chloroethoxy)methane	µg/kg	350 U	350	23	330 U	330	22	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U			
Bis (2-chloroethyl)ether	µg/kg	350 U	350	23	330 U	330	22	320 U	320	21	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U			
Bis(2-chloroisopropyl)ether	µg/kg	31 J	350	26	51 J	330	25	63 J	320	25	24 J	320	24	24 J	320	24	24 J	320	24	24 J	320	24	24 J	320	24	24 J	320	24	24 J	320	24	24 J
Bis(2-ethylhexyl)phthalate	µg/kg	350 U	350	56	330 U	330	54	320 U	320	53	320 U	320	53	320 U	320	53	320 U	320	53	320 U	320	53	320 U	320	53	320 U	320	53	320 U			
Bisphenol A	µg/kg	350 U	350	20	25 J	330	19	20 J	320	18	21 J	320	18	21 J	320	18	21 J	320	18	21 J	320	18	21 J	320	18	21 J	320	18	21 J	320	18	21 J
Butyl benzyl phthalate	µg/kg	350 U	350	150	330 U	330	140	320 U	320	140	320 U	320	140	320 U	320	140	320 U	320	140	320 U	320	140	320 U	320	140	320 U	320	140	320 U			
Carbazole	µg/kg	350 U	350	20	340	330	19	820	320	18	190 J	320	18	190 J	320	18	190 J	320	18	190 J	320	18	190 J	320	18	190 J	320	18	190 J			
Chrysene	µg/kg	21 J	350	20	330 U	330	54	320 U	320	53	320 U	320	53	320 U	320	53	320 U	320	53	320 U	320	53	320 U	320	53	320 U	320	53	320 U			
Di-n-butyl phthalate	µg/kg	350 U	350	56	330 U	330	38	320 U	320	37	320 U	320	37	320 U	320	37	320 U	320	37	320 U	320	37	320 U	320	37	320 U	320	37	320 U			
Di-n-octyl phthalate	µg/kg	350 U	350	39	330 U	330	38	320 U	320	37	320 U	320	37	320 U	320	37	320 U	320	37	320 U	320	37	320 U	320	37	320 U	320	37	320 U			
Dibenz[a,h]anthracene	µg/kg	350 U	350	20	91 J	330	19	190 J	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J	320	18	180 J			
Dibenzoturan	µg/kg	350 U	350	35	330 U	330	33	320 U	320	32	320 U	320	32	320 U	320	32	320 U	320	32	320 U	320	32	320 U	320	32	320 U	320	32	320 U			
Diethyl phthalate	µg/kg	350 U	350	32	330 U	330	31	320 U	320	30	320 U	320	30	320 U	320	30	320 U	320	30	320 U	320	30	320 U	320	30	320 U	320	30	320 U			
Dimethyl phthalate	µg/kg	350 U	350	28	330 U	330	27	320 U	320	26	320 U	320	26	320 U	320	26	320 U	320	26	320 U	320	26	320 U	320	26	320 U	320	26	320 U			
Fluoranthene	µg/kg	350 U	350	45	350	330	43	1000	320	42	180 J	320	42	180 J	320	42	180 J	320	42	180 J	320	42	180 J	320	42	180 J	320	42	180 J			
Fluorene	µg/kg	350 U	350	28	330 U	330	27	320 U	320	26	320 U	320	26	320 U	320	26	320 U	320	26	320 U	320	26	320 U	320	26	320 U	320	26	320 U			
Hexachlorobenzene	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U			
Hexachlorobutadiene	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U			
Hexachlorocyclopentadiene	µg/kg	350 U	350	21	330 U	330	20	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U			
Hexachloroethane	µg/kg	350 U	350	25	330 U	330	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U			
Hydroquinone	µg/kg	350 U	350	20	290 J	330	19	630	320	18	160 J	320	18	160 J	320	18	160 J	320	18	160 J	320	18	160 J	320	18	160 J	320	18	160 J			
Indeno[1,2,3-cd]pyrene	µg/kg	350 U	350	23	330 U	330	22	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U			
Isophorone	µg/kg	350 U	350	21	330 U	330	20	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U			
N-Nitrosodi-n-propylamine	µg/kg	350 U	350	21	330 U	330	20	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U			
N-Nitrosodiphenylamine	µg/kg	350 U	350	20	330 U	330	19	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18	320 U			
Naphthalene	µg/kg	350 U	350	22	330 U	330	21	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U	320	20	320 U			
Nitrobenzene	µg/kg	350 U	350	23	330 U	330	22	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U	320	21	320 U			
Pentachlorophenol	µg/kg	350 U	350	21	330 U	330	20	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19	320 U			
Phenanthrene	µg/kg	350 U	350	26	120 J	330	25	300 J	320	25	64 J	320	25	64 J	320	25	64 J	320	25	64 J	320	25	64 J	320	25	64 J	320	25	64 J	320	25	64 J
Phenol	µg/kg	350 U	350	25	330 U	330	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U			

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	ST-16A-SW-01 04/14/97 1.0	ST-16A-SW-02 04/14/97 0.5	ST-16A-SW-03 04/14/97 0.5	ST-16A-SW-04 04/14/97 0.5	ST-16A-SB-11 6/25/1997
Location Code	17306-996	17306-997	17306-998	17306-999	17306-1173
Date Sampled					ST-16A-SB-11 6/25/1997
Depth (feet below ground surface)					
Unit	Result Qfr	RDL	MDL	Result Qfr	RDL
Pyrene	350 U	350	30	340	330
Pyridine	350 U	350	81	330 U	330
	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg



Table A-2**Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin**

Sample Identification	17306-1177 ST-16A-SB-15 6/24/1997	17306-1179 ST-16A-SB-17 6/25/1997	17306-1179 ST-16A-SB-19 6/25/1997
Location Code			
Depth (feet below ground surface)			
<i>EPA 8270</i>			
1,2,4-Trichlorobenzene	µg/kg	330U	320U
1,2-Dichlorobenzene	µg/kg	330U	320U
1,3-Dichlorobenzene	µg/kg	330U	320U
1,4-Dichlorobenzene	µg/kg	330U	320U
2,4,5-Trichlorophenol	µg/kg	1700U	320U
2,4,6-Trichlorophenol	µg/kg	330U	1700U
2,4-Dichlorophenol	µg/kg	330U	320U
2,4-Dimethylphenol	µg/kg	330U	320U
2,4-Dinitrophenol	µg/kg	330U	320U
2,4-Dinitrotoluene	µg/kg	1700U	320U
2,6-Dinitrotoluene	µg/kg	330U	1700U
2-Chlororaphthalene	µg/kg	330U	320U
2-Chlorophenol	µg/kg	330U	320U
2-Methyl-4,6-dinitrophenol	µg/kg	1700U	320U
2-Methylnaphthalene	µg/kg	330U	1700U
2-Methylphenol	µg/kg	330U	320U
2-Nitroaniline	µg/kg	330U	320U
2-Nitrophenol	µg/kg	1700U	320U
3,3-Dichlorobenzidine	µg/kg	330U	320U
3-Methyl-4-chlorophenol	µg/kg	650U	650U
3-Nitroaniline	µg/kg	330U	320U
4-Bromophenyl phenyl ether	µg/kg	1700U	320U
4-Chloroaniline	µg/kg	330U	320U
4-Chlorophenyl phenyl ether	µg/kg	330U	320U
4-Methylphenol	µg/kg	330U	320U
4-Nitroaniline	µg/kg	1700U	320U
4-Nitrophenol	µg/kg	1700U	1700U
Acenaphthene	µg/kg	330U	1700U
Acenaphthylene	µg/kg	330U	320U
Aniline	µg/kg	330U	320U
Anthracene	µg/kg	330U	320U
Benzidine	µg/kg	1700U	1700U
Benzofuran	µg/kg	20J	59J
Benzopyrene	µg/kg	42J	110J

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification	17306-1177 ST-16A-SB-15 6/24/1997			17306-1179 ST-16A-SB-17 6/25/1997			17306-1181 ST-16A-SB-19 6/25/1997			
Location Code	Unit	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL
Date Sampled	µg/kg	120J	250J		78J	280J			120J	
Depth (feet below ground surface)	µg/kg	48J	320U		320U	320U			320U	
Benzol[b]fluoranthene	µg/kg	330U	1700UJ		1700UJ	1700UJ			1700UJ	
Benzol[g]perylene	µg/kg	1700UJ	320UJ		320UJ	320UJ			320UJ	
Benzol[k]fluoranthene	µg/kg	330U	320U		320U	320U			320U	
Benzoc acid	µg/kg	330U	320U		320U	320U			320U	
Benzyl alcohol	µg/kg	330UJ	320UJ		320UJ	320UJ			320UJ	
Bis (2-chloroethoxy)methane	µg/kg	330U	320U		320U	320U			320U	
Bis (2-chloroethyl)ether	µg/kg	330U	320U		320U	320U			320U	
Bis (2-chloroisopropyl)ether	µg/kg	330U	320U		320U	320U			320U	
Bis (2-ethylhexyl)phthalate	µg/kg	35J	40J		40J	130J			130J	
Bisphenol A	µg/kg	330U	320U		320U	320U			320U	
Butyl benzyl phthalate	µg/kg	330U	320U		320U	320U			320U	
Carbazole	µg/kg	330U	320U		320U	320U			320U	
Chrysene	µg/kg	46J	120J		120J	130J			130J	
Di-n-butyl phthalate	µg/kg	330U	320U		320U	320U			320U	
Di-n-octyl phthalate	µg/kg	330U	320U		320U	320U			320U	
Dibenz[a,h]anthracene	µg/kg	330U	320U		320U	320U			320U	
Dibenzofuran	µg/kg	330U	320U		320U	320U			320U	
Diethyl phthalate	µg/kg	330U	320U		320U	320U			320U	
Dimethyl phthalate	µg/kg	330U	320U		320U	320U			320U	
Fluoranthene	µg/kg	330U	140J		140J	120J			120J	
Fluorene	µg/kg	330U	320U		320U	320U			320U	
Hexachlorobenzene	µg/kg	330U	320U		320U	320U			320U	
Hexachlorobutadiene	µg/kg	330U	320U		320U	320U			320U	
Hexachlorocyclopentadiene	µg/kg	330U	320U		320U	320U			320U	
Hexachloroethane	µg/kg	330U	320U		320U	320U			320U	
Hydroquinone	µg/kg	330UJ	320UJ		320UJ	320UJ			320UJ	
Indenol[1,2,3-c]pyrene	µg/kg	42J	77J		77J	110J			110J	
Isophorone	µg/kg	330U	320U		320U	320U			320U	
N-Nitrosodi-n-propylamine	µg/kg	330U	320U		320U	320U			320U	
N-Nitrosodiphenylamine	µg/kg	330U	320U		320U	320U			320U	
Naphthalene	µg/kg	330U	320U		320U	320U			320U	
Nitrobenzene	µg/kg	330U	320U		320U	320U			320U	
Pentachlorophenol	µg/kg	330U	76J		76J	320U			320U	
Phenanthrene	µg/kg	330U	320U		320U	320U			320U	
Phenol	µg/kg									

Table A-2
Analytical Results for Confirmatory Soil Samples — Site ST-16A, MCAS Tustin

Sample Identification		ST-16A-SB-15 6/24/1997		17306-1179 ST-16A-SB-17 6/25/1997		17306-1181 ST-16A-SB-19 6/25/1997						
Location Code	Date Sampled	Depth (feet below ground surface)	Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
			µg/kg	32J			130J			91J		
Pyrene				32J			320UJ			320UJ		
Pyridine				330UJ						320UJ		

Notes:

U = indicates the analyte was not detected at or above the stated limit.

UJ = indicates the analyte was not detected at or above the stated limit. The sample detection limit is an estimated value.

J = indicates an estimated value.

Qfr = qualifier

RDL = reportable detection limit

MDL = method detection limit

µg/kg = micrograms per kilogram

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	Unit	Result Qtr.	RDL	MDL																													
TPH as Diesel	mg/kg	NA		NA				NA			NA				NA			NA			NA															
TPH as Gasoline	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Unknown Hydrocarbons	mg/kg	NA		NA				NA			NA				NA			NA			NA															
<i>EPA 6/010</i>																																				
Aluminum	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Antimony	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Arsenic	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Barium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Beryllium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Cadmium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Calcium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Chromium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Cobalt	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Copper	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Iron	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Lead	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Magnesium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Manganese	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Molybdenum	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Nickel	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Potassium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Selenium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Silver	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Sodium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Thallium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Tin	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Vanadium	mg/kg	NA		NA				NA			NA				NA			NA			NA															
Zinc	mg/kg	NA		NA				NA			NA				NA			NA			NA															
<i>EPA 7/471A</i>																																				
Mercury	µg/kg	NA		NA				NA			NA				NA			NA			NA															
<i>EPA 8/081</i>																																				
4,4'-DDD	µg/kg	NA		NA				NA			NA				NA			NA			NA															
4,4'-DDT	µg/kg	NA		NA				NA			NA				NA			NA			NA															
Aldrin	µg/kg	NA		NA				NA			NA				NA			NA			NA															
alpha-BHC	µg/kg	NA		NA				NA			NA				NA			NA			NA															
alpha-Chlordane	µg/kg	NA		NA				NA			NA				NA			NA			NA															
Aroclor-1016	µg/kg	NA		NA				NA			NA				NA			NA			NA															
Aroclor-1221	µg/kg	NA		NA				NA			NA				NA			NA			NA															

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	17306-1120 ST-16A-SB-06 05/30/97				17306-1121 ST-16A-SB-07 05/30/97				17306-1122 ST-16A-SB-08 05/30/97				17306-1123 ST-16A-SB-09 05/30/97				17306-1124 (D/up) ST-16A-SB-10 05/30/97				17306-1174 ST-16A-SB-12 06/20/97			
				Unit	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL		
Aroclor-1232				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Aroclor-1242				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Aroclor-1248				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Aroclor-1254				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Aroclor-1260				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Beta-BHC				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Delta-BHC				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Dieldrin				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Endosulfan I				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Endosulfan II				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Endosulfan sulfate				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Endrin				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Endrin aldehyde				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Gammam-BHC				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Gammam-Chlordane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Heptachlor				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Heptachlor epoxide				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Methoxychlor				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Toxaphene				µg/kg	NA			NA			NA			NA			NA			NA			NA				
EPA 8260/4																											
1,1,1-Trichloroethane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
1,1,2,2-Tetrachloroethane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
1,1,2,2,2,2,2-Trihaloethane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
1,1,2-Trichloroethane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
1,1-Dichloroethane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
1,1-Dichloroethene				µg/kg	NA			NA			NA			NA			NA			NA			NA				
1,2,3-Trichloropropane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
1,2-Dichloroethane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
1,2-Dichloropropane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
2-Butanone (MEK)				µg/kg	NA			NA			NA			NA			NA			NA			NA				
2-Chloroethyl vinyl ether				µg/kg	NA			NA			NA			NA			NA			NA			NA				
2-Hexanone				µg/kg	NA			NA			NA			NA			NA			NA			NA				
4-Methyl-2-pentanone (MBK)				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Acetone				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Benzene				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Bromodichloromethane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Bromoform				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Bromonitriane				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Carbon disulfide				µg/kg	NA			NA			NA			NA			NA			NA			NA				
Carbon tetrachloride				µg/kg	NA			NA			NA			NA			NA			NA			NA				

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	17306-1120 ST-16A-SB-06 05/30/97 Surface			17306-1121 ST-16A-SB-07 05/30/97 Surface			17306-1122 ST-16A-SB-08 05/30/97 Surface			17306-1123 ST-16A-SB-09 05/30/97 Surface			17306-1124 (Dip) ST-16A-SB-10 05/30/97 Surface			17306-1174 ST-16A-SB-12 06/20/97 0.5 Surface		
				Unit	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL											
Chlorobenzene				µg/kg	NA			NA			NA			NA			NA				
Chloroethane				µg/kg	NA			NA			NA			NA			NA				
Chloroform				µg/kg	NA			NA			NA			NA			NA				
Chloromethane				µg/kg	NA			NA			NA			NA			NA				
cis-1,2-Dichloroethane				µg/kg	NA			NA			NA			NA			NA				
cis-1,3-Dichloropropene				µg/kg	NA			NA			NA			NA			NA				
Dibromochloromethane				µg/kg	NA			NA			NA			NA			NA				
Dichlorodifluoromethane				µg/kg	NA			NA			NA			NA			NA				
Ethylbenzene				µg/kg	NA			NA			NA			NA			NA				
Methyl tert-butyl ether (MTBE)				µg/kg	NA			NA			NA			NA			NA				
Methylene chloride				µg/kg	NA			NA			NA			NA			NA				
Styrene				µg/kg	NA			NA			NA			NA			NA				
Tetrachloroethene				µg/kg	NA			NA			NA			NA			NA				
Toluene				µg/kg	NA			NA			NA			NA			NA				
trans-1,2-Dichloroethene				µg/kg	NA			NA			NA			NA			NA				
trans-1,3-Dichloropropene				µg/kg	NA			NA			NA			NA			NA				
Trichloroethene				µg/kg	NA			NA			NA			NA			NA				
Trichlorofluoromethane				µg/kg	NA			NA			NA			NA			NA				
Vinyl acetate				µg/kg	NA			NA			NA			NA			NA				
Vinyl chloride				µg/kg	NA			NA			NA			NA			NA				
Xylenes (total)				µg/kg	NA			NA			NA			NA			NA				
EPA 8270																					
1,2,4-Trichlorobenzene				µg/kg	320 U	320	24	320 U	320	25	320 U	320	25	330 U	330	25	390 U	390	30		
1,2-Dichlorobenzene				µg/kg	320 U	320	23	320 U	320	24	320 U	320	24	330 U	330	24	390 U	390	29		
1,3-Dichlorobenzene				µg/kg	320 U	320	18	320 U	320	18	330 U	330	19	390 U	390	22	330 U	330	19		
1,4-Dichlorobenzene				µg/kg	320 U	320	22	320 U	320	22	320 U	320	23	330 U	330	27	390 U	390	27		
2,4,5-Trichlorophenol				µg/kg	1700 U	1700	24	1700 U	1700	25	1700 U	1700	25	1800 U	1800	25	2100 U	2100	30		
2,4,6-Trichlorophenol				µg/kg	320 U	320	20	320 U	320	20	320 U	320	20	330 U	330	21	390 U	390	25		
2,4-Dichlorophenol				µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	330 U	330	19	390 U	390	22		
2,4-Dimethylphenol				µg/kg	320 U	320	20	320 U	320	20	320 U	320	20	330 U	330	25	390 U	390	25		
2,4-Dinitrophenol				µg/kg	1700 U	1700	220	1700 U	1700	220	1700 U	1700	230	1800 U	1800	270	2100 U	2100	270		
2,4-Dinitrotoluene				µg/kg	320 U	320	23	320 U	320	24	320 U	320	24	330 U	330	24	390 U	390	29		
2-Chloronaphthalene				µg/kg	320 U	320	21	320 U	320	21	320 U	320	22	330 U	330	22	390 U	390	22		
2-Chlorophenol				µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	330 U	330	19	390 U	390	21		
2-Methyl-4,6-dinitrophenol				µg/kg	1700 U	1700	180	1700 U	1700	180	1700 U	1700	180	1800 U	1800	190	2100 U	2100	220		
2-Methylnaphthalene				µg/kg	320 U	320	21	320 U	320	21	320 U	320	22	330 U	330	22	390 U	390	26		
2-Methylphenol				µg/kg	1700 U	1700	150	1700 U	1700	150	1700 U	1700	150	1800 U	1800	150	2100 U	2100	180		
2-Nitroniline				µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	330 U	330	19	390 U	390	22		
2-Nitrophenol				µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	330 U	330	19	390 U	390	19		

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	17306-1120			17306-1121			17306-1122			17306-1123			17306-1124 (Dup)			17306-1174			ST-16A-SB-12 06/20/97	0.5		
		ST-16A-SB-06 05/30/97	Surface	Result Qtr	RDL	MDL	ST-16A-SB-07 05/30/97	Surface	Result Qtr	RDL	MDL	ST-16A-SB-08 05/30/97	Surface	Result Qtr	RDL	MDL	ST-16A-SB-10 05/30/97	Surface	Result Qtr	RDL	MDL		
Date Sampled	Depth (feet below ground surface)	Unit	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL
3,3'-Dichlorobenzidine		µg/kg	630 U	630	56	640 U	640	57	650 U	650	57	660 U	660	58	750 U	790	69	660 U	660	58	660 U	660	58
3-Methyl-4-chlorophenol		µg/kg	320 U	320	26	320 U	320	27	320 U	320	27	330 U	330	28	350 U	390	33	330 U	330	27	330 U	330	27
3-Nitroaniline		µg/kg	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	1800 U	1800	310	2100 U	2100	370	1800 U	1800	310	1800 U	1800	310
4-Bromophenyl phenyl ether		µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	330 U	330	19	390 U	390	22	330 U	330	19	330 U	330	19
4-Chloraniline		µg/kg	320 U	320	69	320 U	320	69	320 U	320	70	330 U	330	72	390 U	390	85	330 U	330	71	330 U	330	71
4-Chlorophenyl phenyl ether		µg/kg	320 U	320	30	320 U	320	30	320 U	320	30	330 U	330	31	390 U	390	37	330 U	330	31	330 U	330	31
4-Methylphenol		µg/kg	320 U	320	22	320 U	320	22	320 U	320	23	330 U	330	23	390 U	390	27	330 U	330	23	330 U	330	23
4-Nitroaniline		µg/kg	1700 U	1700	310	1700 U	1700	310	1700 U	1700	310	1800 U	1800	320	2100 U	2100	380	1800 U	1800	320	1800 U	1800	320
4-Nitrophenol		µg/kg	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	1800 U	1800	310	2100 U	2100	370	1800 U	1800	310	1800 U	1800	310
Acenaphthene		µg/kg	320 U	320	22	320 U	320	22	320 U	320	23	330 U	330	23	390 U	390	27	330 U	330	23	330 U	330	23
Acenaphthylene		µg/kg	320 U	320	26	320 U	320	26	320 U	320	27	330 U	330	27	390 U	390	33	330 U	330	27	330 U	330	27
Aniline		µg/kg	320 U	320	26	320 U	320	26	320 U	320	27	330 U	330	28	390 U	390	33	330 U	330	27	330 U	330	27
Anthracene		µg/kg	23 J	320	22	320 U	320	22	320 U	320	23	330 U	330	23	390 J	390	27	330 J	330	23	330 J	330	23
Benzidine		µg/kg	1700 U	1700	560	1700 U	1700	570	1700 U	1700	570	1800 U	1800	580	2100 U	2100	690	1800 UJ	1800	580	1800 UJ	1800	580
Benz[a]anthracene		µg/kg	160 J	320	18	100 J	320	18	46 J	320	18	140 J	320	19	160 J	330	22	240 J	330	19	240 J	330	19
Benz[a]pyrene		µg/kg	250 J	320	19	170 J	320	19	80 J	320	19	260 J	320	19	270 J	330	24	270 J	330	20	270 J	330	20
Benzo[b]fluoranthene		µg/kg	730 J	320	18	460 J	320	18	260 J	320	18	1100 J	330	19	1200 J	330	22	1200 J	330	19	1200 J	330	19
Benzo[b]phenanthrene		µg/kg	230 J	320	18	120 J	320	18	75 J	320	18	490 J	330	19	420 J	330	22	220 J	330	19	220 J	330	19
Benzo[k]fluoranthene		µg/kg	320 UJ	320	18	320 UJ	320	18	320 UJ	320	18	330 UJ	330	19	390 UJ	330	22	390 UJ	330	19	390 UJ	330	19
Benzene acid		µg/kg	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	1800 U	1800	120	2100 U	2100	140	1800 UJ	1800	120	1800 UJ	1800	120
Benzyl alcohol		µg/kg	320 U	320	27	320 U	320	28	320 U	320	28	330 U	330	29	390 U	330	34	330 U	330	29	330 U	330	29
Bis(2-chloroethoxy)methane		µg/kg	320 U	320	21	320 U	320	21	320 U	320	22	330 U	330	22	390 U	330	26	330 U	330	22	330 U	330	22
Bis(2-chloroethyl)ether		µg/kg	320 U	320	21	320 U	320	21	320 U	320	22	330 U	330	22	390 U	330	26	330 U	330	22	330 U	330	22
Bis(2-chloropropyl)ether		µg/kg	20 J	320	20	20 J	320	20	20 J	320	20	330 U	330	21	390 U	330	25	330 U	330	21	330 U	330	21
Bis(2-ethylhexyl)phthalate		µg/kg	130 J	320	24	84 J	320	25	67 J	320	25	500 J	330	25	180 J	330	30	66 J	330	25	66 J	330	25
Bisphenol A		µg/kg	320 U	320	320 U	320	320 U	320	320 U	320	320 U	330	320	330	320	330	30	390 UJ	330	30	390 UJ	330	30
Bisphenol A bisphenol phthalate		µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	24 J	330	19	390 U	330	22	330 U	330	19	330 U	330	19
Butyl benzyl phthalate		µg/kg	320 U	320	140	320 U	320	140	320 U	320	140	330 U	330	140	330 U	330	170	330 U	330	140	330 U	330	140
Carbazole		µg/kg	300 J	320	18	200 J	320	18	100 J	320	18	390 J	330	19	380 J	330	22	380 J	330	19	380 J	330	19
Chrysene		µg/kg	320 U	320	52	320 U	320	52	320 U	320	53	330 U	330	54	390 U	330	64	330 U	330	54	330 U	330	54
Di-n-butyl phthalate		µg/kg	320 U	320	36	320 UJ	320	36	320 U	320	37	330 UJ	330	38	390 UJ	330	45	390 UJ	330	37	390 UJ	330	37
Di-n-octyl phthalate		µg/kg	300 J	320	41	180 J	320	42	80 J	320	42	120 J	330	19	85 J	330	22	89 J	330	19	89 J	330	19
Dibenz[a,h]anthracene		µg/kg	320 U	320	32	320 U	320	32	320 U	320	32	330 U	330	33	390 U	330	22	390 U	330	33	390 U	330	33
Dieethyl phthalate		µg/kg	320 U	320	30	320 U	320	30	320 U	320	30	330 U	330	31	390 U	330	37	390 U	330	31	390 U	330	31
Dimethyl phthalate		µg/kg	320 U	320	25	320 U	320	26	320 U	320	26	330 U	330	26	390 U	330	31	390 U	330	26	390 U	330	26
Fluoranthene		µg/kg	300 J	320	25	320 U	320	26	320 U	320	26	330 U	330	26	390 U	330	43	460 J	330	43	460 J	330	43
Fluorene		µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	330 U	330	19	390 U	330	31	390 U	330	19	390 U	330	19
Hexachlorobenzene		µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	330 U	330	19	390 U	330	22	390 U	330	19	390 U	330	19
Hexachlorobutadiene		µg/kg	320 U	320	19	320 U	320	19	320 U	320	19	330 U	330	20	390 U	330	24	390 U	330	20	390 U	330	20
Hexachlorocyclopentadiene		µg/kg	320 U	320	19	320 U	320	19	320 U	320	19	330 U	330	20	390 U	330	24	390 U	330	20	390 U	330	20

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	17306-1120 ST-16A-SB-06 05/30/97			17306-1121 ST-16A-SB-07 05/30/97			17306-1122 ST-16A-SB-08 05/30/97			17306-1123 ST-16A-SB-09 05/30/97			17306-1124 (Dup) ST-16A-SB-10 05/30/97			17306-1174 ST-16A-SB-12 06/20/97			
Location Code	Surface			Surface			Surface			Surface			Surface			Surface			
Date Sampled	Unit	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL									
Hexachloroethane	µg/kg	320 U	320	23	320 U	320	24	320 U	320	24	330 U	330	24	390 U	390	29	330 U	330	24
Hydroquinone	µg/kg	320 UJ	320	18	320 UJ	320	18	320 UJ	320	18	330 UJ	330	19	390 UJ	390	22	330 UJ	330	19
Indeno[1,2,3-cd]pyrene	µg/kg	210 J	320	18	110 J	320	18	67 J	320	18	440	330	19	350 J	390	22	210 J	330	19
Isophorone	µg/kg	320 U	320	21	320 U	320	21	320 U	320	22	330 U	330	22	390 U	390	26	330 U	330	22
N-Nitrosodi-n-propylamine	µg/kg	320 U	320	19	320 U	320	19	320 U	320	19	330 U	330	20	390 U	390	24	330 U	330	20
N-Nitrosodiphenylamine	µg/kg	320 U	320	18	320 U	320	18	320 U	320	18	330 U	330	19	390 U	390	22	330 U	330	19
Naphthalene	µg/kg	320 U	320	20	320 U	320	20	320 U	320	20	330 U	330	21	390 U	390	25	330 U	330	21
Nitrobenzene	µg/kg	320 U	320	21	320 U	320	21	320 U	320	22	330 U	330	22	390 U	390	26	330 U	330	22
Pentachlorophenol	µg/kg	320 U	320	190	320 U	320	190	320 U	320	190	330 U	330	200	390 U	390	240	330 U	330	200
Phenanthrene	µg/kg	95 J	320	24	46 J	320	25	320 UJ	320	25	60 J	330	25	72 J	390	30	130 J	330	25
Phenol	µg/kg	320 U	320	23	320 U	320	24	320 U	320	24	330 U	330	24	390 U	390	29	330 U	330	24
Pyrene	µg/kg	320 U	320	27	200 J	320	28	84 J	320	28	290 J	330	29	310 J	390	34	420	330	29
Pyridine	µg/kg	320 U	320	74	320 U	320	75	320 U	320	75	330 U	330	77	390 U	390	92	330 UJ	330	77
<i>EPA 8310</i>																			
Acenaphthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Acenaphthylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Benzol[a]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Benzol[a]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Benzof[b]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Benzog[hi]perylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Benzol[K]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Chrysene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Dibenz[a,h]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Fluorene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Indeno[1,2,3-cd]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Naphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Phenanthrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									
Cyanide	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA									

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Unit	Result Qty	RDL	MDL												
TPH as Diesel	mg/kg	NA														
TPH as Gasoline	mg/kg	NA														
Unknown Hydrocarbons	mg/kg	NA														
<i>EPA 6010</i>																
Aluminum	mg/kg	NA														
Antimony	mg/kg	NA														
Arsenic	mg/kg	NA														
Barium	mg/kg	NA														
Beryllium	mg/kg	NA														
Cadmum	mg/kg	NA														
Calcium	mg/kg	NA														
Chromium	mg/kg	NA														
Cobalt	mg/kg	NA														
Copper	mg/kg	NA														
Iron	mg/kg	NA														
Lead	mg/kg	NA														
Magnesium	mg/kg	NA														
Manganese	mg/kg	NA														
Molybdenum	mg/kg	NA														
Nickel	mg/kg	NA														
Potassium	mg/kg	NA														
Selenium	mg/kg	NA														
Silver	mg/kg	NA														
Sodium	mg/kg	NA														
Thallium	mg/kg	NA														
Tin	mg/kg	NA														
Vanadium	mg/kg	NA														
Zinc	mg/kg	NA														
<i>EPA 7471A</i>																
Mercury	mg/kg	NA														
<i>EPA 8081</i>																
4,4'-DDD	µg/kg	NA														
4,4'-DDE	µg/kg	NA														
4,4'-DDT	µg/kg	NA														
Aldrin	µg/kg	NA														
alpha-BHC	µg/kg	NA														
alpha-Chlordane	µg/kg	NA														
Aroclor-1016	µg/kg	NA														
Aroclor-1222	µg/kg	NA														

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	17306-1175 ST-16A-SB-13 06/20/97			17306-1176 ST-16A-SB-14 06/20/97			17306-1178 ST-16A-SB-16 06/20/97			17306-1180 ST-16A-SB-18 06/20/97			17306-1182 ST-16A-SB-20 06/20/97			17306-1183 (Dip) ST-16A-SB-21 06/20/97		
				Unit	Result Qlf	RDL	MDL														
Aroclor-1232				µg/kg	NA	NA	NA														
Aroclor-1242				µg/kg	NA	NA	NA														
Aroclor-1248				µg/kg	NA	NA	NA														
Aroclor-1254				µg/kg	NA	NA	NA														
Aroclor-1260				µg/kg	NA	NA	NA														
Beta-BHC				µg/kg	NA	NA	NA														
Delta-BHC				µg/kg	NA	NA	NA														
Dieldrin				µg/kg	NA	NA	NA														
Endosulfan 1				µg/kg	NA	NA	NA														
Endosulfan II				µg/kg	NA	NA	NA														
Endosulfan sulfate				µg/kg	NA	NA	NA														
Endrin				µg/kg	NA	NA	NA														
Endrin aldehyde				µg/kg	NA	NA	NA														
Gamma-BHC				µg/kg	NA	NA	NA														
gamma-Chlordane				µg/kg	NA	NA	NA														
Heptachlor				µg/kg	NA	NA	NA														
Heptachlor epoxide				µg/kg	NA	NA	NA														
Methoxychlor				µg/kg	NA	NA	NA														
Toxaphene				µg/kg	NA	NA	NA														
				<i>EPA 8260A</i>																	
1,1,1-Trichloroethane				µg/kg	NA	NA	NA														
1,1,2,2-Tetrachloroethane				µg/kg	NA	NA	NA														
1,1,2-Trichloro-1,2,2-trifluoroethane				µg/kg	NA	NA	NA														
1,1,2-Trichloroethane				µg/kg	NA	NA	NA														
1,1-Dichloroethane				µg/kg	NA	NA	NA														
1,1-Dichloroethene				µg/kg	NA	NA	NA														
1,2,3-Trichloropropene				µg/kg	NA	NA	NA														
1,2-Dichloroethane				µg/kg	NA	NA	NA														
1,2-Dichloropropane				µg/kg	NA	NA	NA														
2-Butanone (MEK)				µg/kg	NA	NA	NA														
2-Chloroethyl vinyl ether				µg/kg	NA	NA	NA														
2-Hexanone				µg/kg	NA	NA	NA														
4-Methyl-2-pentanone (MBK)				µg/kg	NA	NA	NA														
Acetone				µg/kg	NA	NA	NA														
Benzene				µg/kg	NA	NA	NA														
Bromodichloromethane				µg/kg	NA	NA	NA														
Bromoform				µg/kg	NA	NA	NA														
Bromonethane				µg/kg	NA	NA	NA														
Carbon disulfide				µg/kg	NA	NA	NA														
Carbon tetrachloride				µg/kg	NA	NA	NA														

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	17306-1175 ST-16A-SB-13 06/20/97	17306-1176 ST-16A-SB-14 06/20/97	17306-1178 ST-16A-SB-16 06/20/97	17306-1180 ST-16A-SB-18 06/20/97	17306-1182 ST-16A-SB-20 06/20/97	17306-1183 (Up) ST-16A-SB-21 06/20/97
Location Code	0.5	0.5	0.5	0.5	0.5	0.5
Date Sampled						
Depth (feet below ground surface)						
Chlorobenzene	µg/kg	NA	Result Qlf:	NDL	Result Qlf:	NDL
Chloroethane	µg/kg	NA	NDL	NA	NDL	NA
Chloroform	µg/kg	NA	NA	NA	NA	NA
Chloroethane	µg/kg	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	µg/kg	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene	µg/kg	NA	NA	NA	NA	NA
Dibromochloromethane	µg/kg	NA	NA	NA	NA	NA
Dichlorofluoromethane	µg/kg	NA	NA	NA	NA	NA
Ethylbenzene	µg/kg	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)	µg/kg	NA	NA	NA	NA	NA
Methylene chloride	µg/kg	NA	NA	NA	NA	NA
Styrene	µg/kg	NA	NA	NA	NA	NA
Tetrachloroethylene	µg/kg	NA	NA	NA	NA	NA
Toluene	µg/kg	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene	µg/kg	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene	µg/kg	NA	NA	NA	NA	NA
Trichloroethylene	µg/kg	NA	NA	NA	NA	NA
Trichlorofluoromethane	µg/kg	NA	NA	NA	NA	NA
Vinyl acetate	µg/kg	NA	NA	NA	NA	NA
Vinyl chloride	µg/kg	NA	NA	NA	NA	NA
Xylenes (total)	µg/kg	NA	NA	NA	NA	NA
EP4 8270						
1,2,4-Trichlorobenzene	µg/kg	330 U	25	320 U	24	350 U
1,2-Dichlorobenzene	µg/kg	330 U	24	320 U	24	350 U
1,3-Dichlorobenzene	µg/kg	330 U	19	320 U	18	350 U
1,4-Dichlorobenzene	µg/kg	330 U	23	320 U	22	350 U
2,4,5-Trichlorophenol	µg/kg	1800 U	25	1700 U	24	1900 U
2,4,6-Trichlorophenol	µg/kg	330 U	21	320 U	20	330 U
2,4-Dichlorophenol	µg/kg	330 U	19	320 U	18	350 U
2,4-Dimethylphenol	µg/kg	330 U	21	320 U	20	350 U
2,4-Dinitrophenol	µg/kg	1800 U	230	1700 U	230	1900 U
2,4-Dinitrotoluene	µg/kg	330 U	24	320 U	23	350 U
2,6-Dinitrotoluene	µg/kg	330 U	19	320 U	18	350 U
2-Chloronaphthalene	µg/kg	330 U	22	320 U	21	350 U
2-Chlorophenol	µg/kg	330 U	19	320 U	18	350 U
2-Methyl-4,6-dinitrophenol	µg/kg	1800 U	190	1700 U	180	1900 U
2-Methylnaphthalene	µg/kg	330 U	22	320 U	21	350 U
2-Nitrophenol	µg/kg	330 U	19	320 U	18	350 U
2-Nitroaniline	µg/kg	1800 U	150	1700 U	150	1900 U
2-Nitrophenol	µg/kg	330 U	19	320 U	18	350 U

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	17306-1175 ST-16A-SB-13 06/20/97				17306-1176 ST-16A-SB-14 06/20/97				17306-1178 ST-16A-SB-16 06/20/97				17306-1180 ST-16A-SB-18 06/20/97				17306-1182 ST-16A-SB-20 06/20/97					
				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
3,3'-Dichlorobenzidine				µg/kg	660 U	58	650 U	650	57	640 U	640	56	690 U	690	61	650 U	650	57	630 U	650	57	650 U	650	57	
3-Methyl-4-chlorophenol				µg/kg	330 U	27	320 U	320	27	320 U	320	27	350 U	350	29	320 U	320	27	320 U	320	27	320 U	320	27	
3-Nitroaniline				µg/kg	1800 U	310	1700 U	1700	300	1700 U	1700	300	1900 U	1900	320	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	
4-Bromophenyl phenyl ether				µg/kg	330 U	19	320 U	320	18	320 U	320	18	350 U	350	20	320 U	320	18	320 U	320	18	320 U	320	18	
4-Chloroaniline				µg/kg	330 U	71	320 U	320	70	320 U	320	69	350 U	350	75	320 U	320	70	320 U	320	70	320 U	320	70	
4-Chlorophenyl phenyl ether				µg/kg	330 U	31	320 U	320	30	320 U	320	30	350 U	350	32	320 U	320	30	320 U	320	30	320 U	320	30	
4-Methylphenol				µg/kg	330 U	23	320 U	320	23	320 U	320	22	350 U	350	24	320 U	320	23	320 U	320	23	320 U	320	23	
4-Nitroaniline				µg/kg	1800 U	320	1700 U	1700	310	1700 U	1700	310	1900 U	1900	340	1700 U	1700	310	1700 U	1700	310	1700 U	1700	310	
4-Nitrophenol				µg/kg	1800 U	310	1700 U	1700	300	1700 U	1700	300	1900 U	1900	320	1700 U	1700	300	1700 U	1700	300	1700 U	1700	300	
Acenaphthene				µg/kg	330 U	23	320 U	320	23	320 U	320	22	350 U	350	24	320 U	320	23	320 U	320	23	320 U	320	23	
Acenaphthylene				µg/kg	330 U	27	320 U	320	27	320 U	320	27	350 U	350	29	320 U	320	27	320 U	320	27	320 U	320	27	
Aniline				µg/kg	330 U	27	320 U	320	27	320 U	320	27	350 U	350	29	320 U	320	27	320 U	320	27	320 U	320	27	
Anthracene				µg/kg	330 U	23	320 U	320	23	320 U	320	22	350 U	350	24	320 U	320	23	320 U	320	23	320 U	320	23	
Benzidine				µg/kg	1800 U	380	1700 U	1700	570	1700 U	1700	560	1900 U	1900	610	1700 U	1700	570	1700 U	1700	570	1700 U	1700	570	
Benzoflauanthrone				µg/kg	46 J	330	19	27 J	320	18	41 J	320	18	350 U	350	20	350 U	350	21	65 J	350	20	350 U	350	20
Benz[a]pyrene				µg/kg	110 J	330	20	54 J	320	19	82 J	320	19	350 U	350	21	120 J	320	19	180 J	320	19	180 J	320	19
Benz[b]fluoranthene				µg/kg	330	19	140 J	320	18	240 J	320	18	350 U	350	20	310 J	320	18	480	320	18	320 J	320	18	
Benz[e]phenylene				µg/kg	130 J	330	19	57 J	320	18	92 J	320	18	350 U	350	20	170 J	320	18	200 J	320	18	320 J	320	18
Benzof[b]fluoranthene				µg/kg	330 U	19	320 U	320	18	320 U	320	18	350 U	350	20	320 U	320	18	320 U	320	18	320 U	320	18	
Benzotrichloroethane				µg/kg	1800 U	120	1700 U	1700	120	1700 U	1700	120	1900 U	1900	130	1700 U	1700	120	1700 U	1700	120	1700 U	1700	120	
Benzyl alcohol				µg/kg	330 U	28	320 U	320	28	320 U	320	28	350 U	350	30	320 U	320	28	320 U	320	28	320 U	320	28	
Bis(2-chloroethoxy)methane				µg/kg	330 U	22	320 U	320	22	320 U	320	21	350 U	350	23	320 U	320	22	320 U	320	22	320 U	320	22	
Bis(2-chloroethyl)ether				µg/kg	330 U	22	320 U	320	22	320 U	320	21	350 U	350	23	320 U	320	22	320 U	320	22	320 U	320	22	
Bis(2-chloroisopropyl)ether				µg/kg	330 U	21	320 U	320	21	320 U	320	20	350 U	350	22	320 U	320	21	320 U	320	21	320 U	320	21	
Bis(2-ethylhexyl)phthalate				µg/kg	42 J	330	25	34 J	320	25	47 J	320	24	350 U	350	27	320 U	320	25	72 J	320	25	320 U	320	25
Bisphenol A				µg/kg	330 U	330	320 U	320	22	320 U	320	22	350 U	350	30	320 U	320	22	320 U	320	22	320 U	320	22	
Butyl benzyl phthalate				µg/kg	20 J	330	19	320 U	320	18	25 J	320	18	350 U	350	20	51 J	320	18	22 J	320	18	320 U	320	18
Carbazole				µg/kg	330 U	140	320 U	320	140	320 U	320	140	350 U	350	150	320 U	320	140	320 U	320	140	320 U	320	140	
Chrysene				µg/kg	120 J	330	19	54 J	320	18	92 J	320	18	350 U	350	20	130 J	320	18	220 J	320	18	220 J	320	18
Di-n-butyl phthalate				µg/kg	330 U	54	320 U	320	53	320 U	320	52	350 U	350	57	320 U	320	53	320 U	320	53	320 U	320	53	
Di-n-octyl phthalate				µg/kg	330 U	37	320 U	320	37	320 U	320	36	350 U	350	39	320 U	320	37	320 U	320	37	320 U	320	37	
Dibenz[a,h]anthracene				µg/kg	46 J	330	19	320 U	320	18	33 J	320	18	350 U	350	20	65 J	320	18	78 J	320	18	78 J	320	18
Dibenzofuran				µg/kg	330 U	33	320 U	320	32	320 U	320	32	350 U	350	35	320 U	320	32	320 U	320	32	320 U	320	32	
Diethyl phthalate				µg/kg	330 U	31	320 U	320	30	320 U	320	30	350 U	350	32	320 U	320	30	320 U	320	30	320 U	320	30	
Dimethyl phthalate				µg/kg	330 U	26	320 U	320	26	320 U	320	25	350 U	350	28	320 U	320	26	320 U	320	26	320 U	320	26	
Fluoranthene				µg/kg	96 J	330	43	50 J	320	42	73 J	320	41	350 U	350	45	160 J	320	42	150 J	320	42	150 J	320	42
Fluorene				µg/kg	330 U	26	320 U	320	26	320 U	320	25	350 U	350	28	320 U	320	26	320 U	320	26	320 U	320	26	
Hexachlorobenzene				µg/kg	330 U	19	320 U	320	18	320 U	320	18	350 U	350	20	320 U	320	18	320 U	320	18	320 U	320	18	
Hexachlorobutadiene				µg/kg	330 U	19	320 U	320	19	320 U	320	19	350 U	350	20	320 U	320	19	320 U	320	19	320 U	320	19	
Hexachlorocyclopentadiene				µg/kg	330 U	20	320 U	320	19	320 U	320	19	350 U	350	21	320 U	320	19	320 U	320	19	320 U	320	19	

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	17306-1175 ST-16A-SB-13 06/20/97				17306-1176 ST-16A-SB-14 06/20/97				17306-1178 ST-16A-SB-16 06/20/97				17306-1180 ST-16A-SB-18 06/20/97				17306-1182 ST-16A-SB-20 06/20/97									
				Unit	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL				
Hexachloroethane	µg/kg	330 U	24	320 U	24	320	24	320 U	24	320	23	350 U	350	25	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24			
Hydroquinone	µg/kg	330 U	330	320 U	320	320	320	320 U	320	320	320	350 U	350	20	320 U	320	20	320 U	320	18	320 J	320	18	320 U	320	18			
Indeno[1,2,3-cd]pyrene	µg/kg	120 J	19	52 J	18	82 J	18	320 U	18	320	18	350 U	350	20	140 J	140	14	320 U	18	190 J	190	J	320 U	320	18				
Isophorone	µg/kg	330 U	330	22	320 U	22	320	22	320 U	21	320	21	350 U	350	23	320 U	320	22	320 U	320	22	320 U	320	22					
N-Nitrodi-n-propylamine	µg/kg	330 U	20	320 U	19	320 U	19	320 U	19	320	19	350 U	350	21	320 U	320	19	320 U	320	19	320 U	320	19	320 U	320	19			
N-Nitrodiphenylamine	µg/kg	330 U	19	320 U	18	320 U	18	320 U	18	320	18	350 U	350	20	320 U	320	18	320 U	320	18	320 U	320	18	320 U	320	18			
Naphthalene	µg/kg	330 U	21	320 U	21	320 U	21	320 U	21	320	20	350 U	350	22	320 U	320	21	320 U	320	21	320 U	320	20	320 U	320	20			
Nitrobenzene	µg/kg	330 U	22	320 U	22	320 U	22	320 U	22	320	21	350 U	350	23	320 U	320	22	320 U	320	22	320 U	320	22	320 U	320	22			
Pentachlorobiphenol	µg/kg	330 U	200	320 U	190	320 U	190	320 U	190	320	190	350 U	350	210	320 U	320	190	320 U	320	190	320 U	320	190	320 U	320	190			
Phenanthrene	µg/kg	330 U	25	320 U	25	320 U	25	320 U	25	320	24	350 U	350	24	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24			
Phenol	µg/kg	330 U	24	320 U	24	320 U	24	320 U	24	320	23	350 U	350	25	320 U	320	24	320 U	320	24	320 U	320	24	320 U	320	24			
Pyrene	µg/kg	74 J	330	28	41 J	28	320	28	320 U	28	320	28	350 U	350	30	110 J	110	J	320 U	28	180 J	180	J	320 U	28	180 J	320 U	28	180 J
Pyridine	µg/kg	330 U	77	320 U	76	320 U	76	320 U	76	320	74	350 U	350	81	320 U	320	76	320 U	320	76	320 U	320	76	320 U	320	76			
<i>EPA 8310</i>				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Acenaphthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Acenaphthylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzol[a]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzol[a]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzol[b]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzol[e]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Benzol[b]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Chrysene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Dibenz[a,h]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Fluorene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Indeno[1,2,3-cd]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Naphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Phenanthrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
<i>EPA 9010</i>				mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA			
Cyanide																													

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification				20253-1397 ST-16A-SB-22 05/12/00 Surface				20253-1398 ST-16A-SB-22 05/12/00 2.0				20253-1399 ST-16A-SB-23 05/12/00 Surface				20253-1400 ST-16A-SB-24 05/12/00 2.0				20253-1401 ST-16A-SB-24 05/12/00 Surface				
Location Code	Date Sampled	Depth (feet below ground surface)	Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
CA LUFT 8015M																								
TPH as Diesel	05/12/00	1.1 U	mg/kg	460	10.9	.906	19	11.9	.996	NA	190	10.4	.864	21	11.7	.979	NA	1.17	.235	NA	1.17	.235	NA	NA
TPH as Gasoline		1.09	mg/kg		.0217		1.2 U	1.19	.0239	NA	1.0 U	1.04	.0207	1.2 U	1.17		NA							
Unknown Hydrocarbons		NA	mg/kg				NA			NA														
EPA 6010																								
Aluminum		15000	mg/kg	54.3	1.10	24000	59.7	1.21	NA	13000	51.8	1.05	22000	58.7	1.19	NA								
Antimony		11 U	mg/kg	10.9	5.81	12 U	11.9	6.39	NA	10 U	10.4	5.54	12 U	11.7	6.28	NA								
Arsenic		6.6	mg/kg	.54	0.30	9.6	.6	0.33	NA	6.4	.52	0.29	8.8	.59	0.33	NA								
Barium		1.09	mg/kg	1.09	0.04	220	1.19	0.05	NA	110	1.04	0.04	150	1.17	0.05	NA								
Beryllium		0.59	mg/kg	.22	0.01	0.93	.24	0.01	NA	0.49	.21	0.01	0.80	.23	0.01	NA								
Cadmum		1.1 U	mg/kg	1.09	0.11	1.2 U	1.19	0.12	NA	1.4	1.04	0.10	1.2 U	1.17	0.12	NA								
Calcium		8900	mg/kg	109	2.44	24000	119	2.69	NA	9900	104	2.33	26000	117	2.64	NA								
Chromium		32	mg/kg	1.09	0.60	27	1.19	0.66	NA	27	1.04	0.57	24	1.17	0.65	NA								
Cobalt		7.9	mg/kg	2.17	0.91	12	2.39	1.00	NA	7.1	2.07	0.87	10	2.35	0.99	NA								
Copper		23	mg/kg	1.09	0.15	31	1.19	0.17	NA	21	1.04	0.15	27	1.17	0.16	NA								
Iron		22000	mg/kg	5.43	0.63	32000	5.97	0.69	NA	21000	5.18	0.60	28000	5.87	0.68	NA								
Lead		75	mg/kg	.33	0.09	15	.36	0.10	NA	69	.31	0.09	11	.35	0.10	NA								
Magnesium		8300	mg/kg	109	6.00	15000	119	6.61	NA	7400	104	5.73	14000	117	6.49	NA								
Manganese		470	mg/kg	2.17	0.13	700	2.39	0.14	NA	370	2.07	0.12	500	2.35	0.14	NA								
Molybdenum		2.7	mg/kg	2.17	0.66	2.7	2.39	0.73	NA	2.1 U	2.07	0.63	3.1	2.35	0.72	NA								
Nickel		18	mg/kg	2.17	0.67	23	2.39	0.74	NA	14	2.07	0.64	18	2.35	0.73	NA								
Potassium		3300	mg/kg	109	56.7	4600	119	62.4	NA	2800	104	54.1	4700	117	61.3	NA								
Selenium		0.54	mg/kg	.54	0.26	0.60 U	.6	0.29	NA	0.52 U	.52	0.25	0.59 U	.59	0.28	NA								
Silver		1.1 U	mg/kg	1.09	0.89	1.2 U	1.19	0.98	NA	1.0 U	1.04	0.85	1.2 U	1.17	0.96	NA								
Sodium		260	mg/kg	109	0	480	119	0	NA	290	104	0	710	117	0	NA								
Thallium		2.1	mg/kg	1.09	0.37	2.7	1.19	0.41	NA	1.5	1.04	0.36	2.6	1.17	0.40	NA								
Tin		NA	mg/kg	NA		NA	NA		NA	NA			NA			NA								
Vanadium		42	mg/kg	1.09	0.42	58	1.19	0.47	NA	37	1.04	0.40	52	1.17	0.46	NA								
Zinc		410	mg/kg	2.17	0.18	130	2.39	0.20	NA	480	2.07	0.18	100	2.35	0.20	NA								
Mercury		0.11 U	mg/kg	.109	0.304	0.12 U	.119	.0335	NA	0.10 U	.104	.029	0.12 U	.117	.0329	NA								
EPA 8081																								
4,4'-DDD		165 U	mg/kg	65	24	3.6 U	3.6	1.3	NA	62 U	62		3.5 U	3.5	1.3	NA								
4,4'-DDE		65 U	mg/kg	65	14	3.6 U	3.6	.8	NA	62 U	62		3.5 U	3.5	.78	NA								
4,4'-DDT		65 U	mg/kg	65	26	3.6 U	3.6	1.4	NA	62 U	62		3.5 U	3.5	1.4	NA								
Aldrin		330 U	mg/kg	5.5	18 U	18	.3	NA	310 U	5.3		310 U	5.3		18 U									
alpha-BHC		33 U	mg/kg	33	12	1.8 U	1.8	.67	NA	31 U	12		31 U	12		1.8 U								
alpha-Chlordane		330 U	mg/kg	7.3	18 U	18	.4	NA	310 U	6.9		310 U	6.9		18 U									
Aroclor-1016		720 U	mg/kg	93	39 U	39	5.1	NA	680 U	89		39 U	89		18 U									
Aroclor-1221		720 U	mg/kg	720	170	39 U	39	9.4	NA	680 U	160		680 U	160		18 U								

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	20253-1397			20253-1398			20253-1399			20253-1400			20253-1401			20253-1402		
		ST-16A-SB-22 05/12/00			ST-16A-SB-22 05/12/00			ST-16A-SB-23 05/12/00			ST-16A-SB-24 05/12/00			ST-16A-SB-24 05/12/00			ST-16A-SB-25 05/12/00		
		Surface			2.0			Surface			Surface			2.0			Surface		
Unit	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL	
µg/kg	720 U	720	94	39 U	39	5.1	NA	NA	NA	680 U	680	59	39 U	39	5.1	NA	NA	NA	
µg/kg	720 U	720	62	39 U	39	3.4	NA	NA	NA	680 U	680	59	39 U	39	3.3	NA	NA	NA	
µg/kg	720 U	720	62	39 U	39	3.4	NA	NA	NA	680 U	680	64	39 U	39	3.4	NA	NA	NA	
µg/kg	720 U	720	67	39 U	39	3.7	NA	NA	NA	680 U	680	57	39 U	39	3.6	NA	NA	NA	
µg/kg	720 U	720	60	39 U	39	3.3	NA	NA	NA	680 U	680	57	39 U	39	3.2	NA	NA	NA	
µg/kg	330 U	330	12	18 U	18	.65	NA	NA	NA	310 U	310	11	18 U	18	.39	NA	NA	NA	
µg/kg	330 U	330	8	18 U	18	.44	NA	NA	NA	310 U	310	7.7	18 U	18	.43	NA	NA	NA	
µg/kg	65 U	65	31	3.6 U	3.6	1.7	NA	NA	NA	62 U	62	29	3.5 U	3.5	1.7	NA	NA	NA	
µg/kg	33 U	33	15	1.8 U	1.8	.84	NA	NA	NA	31 U	31	15	1.8 U	1.8	.83	NA	NA	NA	
µg/kg	65 U	65	18	3.6 U	3.6	.97	NA	NA	NA	62 U	62	17	3.5 U	3.5	.95	NA	NA	NA	
µg/kg	65 U	65	17	3.6 U	3.6	.94	NA	NA	NA	62 U	62	16	3.5 U	3.5	.92	NA	NA	NA	
µg/kg	65 U	65	30	3.6 U	3.6	1.6	NA	NA	NA	62 U	62	28	3.5 U	3.5	1.6	NA	NA	NA	
µg/kg	65 U	65	19	3.6 U	3.6	1	NA	NA	NA	62 U	62	18	3.5 U	3.5	1	NA	NA	NA	
Endosulfan I																			
Endosulfan II																			
Endosulfan sulfate																			
Endrin																			
Endrin aldehyde																			
Endrin-BHC																			
Gamma-Chlordane																			
Hepachlor																			
Hepachlor epoxide																			
Methoxychlor																			
Toxaphene																			
<i>EPA 82604</i>																			
1,1,1-Trichloroethane	µg/kg	5.4 U	5.4	.46	6.0 U	6	.51	NA	NA	NA	5.2 U	5.2	.44	5.9 U	5.9	.5	NA	NA	NA
1,1,2,2-Tetrachloroethane	µg/kg	5.4 U	5.4	.62	6.0 U	6	.68	NA	NA	NA	5.2 U	5.2	.59	5.9 U	5.9	.67	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/kg	NA	NA	NA	NA	NA													
1,1,2-Trichloroethane	µg/kg	5.4 U	5.4	.49	6.0 U	6	.54	NA	NA	NA	5.2 U	5.2	.47	5.9 U	5.9	.53	NA	NA	NA
1,1-Dichloroethane	µg/kg	5.4 U	5.4	.39	6.0 U	6	.42	NA	NA	NA	5.2 U	5.2	.37	5.9 U	5.9	.42	NA	NA	NA
1,1-Dichloroethene	µg/kg	5.4 U	5.4	1	6.0 U	6	1.1	NA	NA	NA	5.2 U	5.2	.96	5.9 U	5.9	1.1	NA	NA	NA
1,2,3-Trichloropropene	µg/kg	5.4 U	5.4	.59	6.0 U	6	.65	NA	NA	NA	5.2 U	5.2	.56	5.9 U	5.9	.64	NA	NA	NA
1,2-Dibromoethane	µg/kg	5.4 U	5.4	.67	6.0 U	6	.74	NA	NA	NA	5.2 U	5.2	.64	5.9 U	5.9	.73	NA	NA	NA
1,2-Dichloropropane	µg/kg	5.4 U	5.4	.36	6.0 U	6	.4	NA	NA	NA	5.2 U	5.2	.35	5.9 U	5.9	.39	NA	NA	NA
2-Butanone (MEK)	µg/kg	54 U	54	3.6	60 U	60	3.9	NA	NA	NA	52 U	52	3.4	59 U	59	3.8	NA	NA	NA
2-Chloroethyl vinyl ether	µg/kg	5.4 UJ	5.4	3.5	6.0 UJ	6	3.8	NA	NA	NA	5.2 UJ	5.2	3.3	59 UJ	59	3.8	NA	NA	NA
2-Hexanone	µg/kg	54 U	54	3.5	60 U	60	3.9	NA	NA	NA	52 U	52	3.4	59 U	59	3.8	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	µg/kg	54 U	54	3.1	60 U	60	3.4	NA	NA	NA	52 U	52	3	59 U	59	3.3	NA	NA	NA
Acetone	µg/kg	54 U	54	5.7	60 U	60	5.7	NA	NA	NA	52 U	52	4.9	59 U	59	5.6	NA	NA	NA
Benzene	µg/kg	5.4 U	5.4	.23	6.0 U	6	.25	NA	NA	NA	52 U	52	.22	5.9 U	5.9	.25	NA	NA	NA
Bromodichloromethane	µg/kg	5.4 U	5.4	.58	6.0 U	6	.64	NA	NA	NA	52 U	52	.55	5.9 U	5.9	.63	NA	NA	NA
Bromoform	µg/kg	5.4 U	5.4	1	6.0 U	6	1.1	NA	NA	NA	52 U	52	.98	5.9 U	5.9	1.1	NA	NA	NA
Bromonmethane	µg/kg	5.4 U	5.4	1.1	6.0 U	6	1.2	NA	NA	NA	52 U	52	1	5.9 U	5.9	1.2	NA	NA	NA
Carbon disulfide	µg/kg	NA	NA	NA	NA	NA													
Carbon tetrachloride	µg/kg	5.4 U	5.4	.56	6.0 U	6	.61	NA	NA	NA	52 U	52	.53	5.9 U	5.9	.6	NA	NA	NA

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1397			20253-1398			20253-1399			20253-1400			20253-1401			20253-1402		
	ST-16A-SB-22	05/12/00	Surface	ST-16A-SB-22	05/12/00	Surface	ST-16A-SB-23	05/12/00	Surface	ST-16A-SB-24	05/12/00	Surface	ST-16A-SB-24	05/12/00	Surface	ST-16A-SB-25	05/12/00	Surface
Location Code																		
Date Sampled																		
Depth (feet below ground surface)																		
Unit	Result Qtr	RDL	MDL															
µg/kg	5.4 U	5.4	.34	6.0 U	6	.38	NA			5.2 U	.33	.33	5.9 U	.37	.37	NA		
µg/kg	5.4 U	5.4	2.1	6.0 U	6	2.3	NA			5.2 U	2	.52	5.9 U	2.3	2.3	NA		
µg/kg	5.4 U	5.4	.47	6.0 U	6	.51	NA			5.2 U	.45	.52	5.9 U	.51	.51	NA		
µg/kg	5.4 U	5.4	1	6.0 U	6	1.1	NA			5.2 U	.96	.52	5.9 U	1.1	1.1	NA		
Chloromethane																		
cis-1,2-Dichloroethene																		
cis-1,3-Dichloropropene																		
Dibromochloromethane																		
Dichlorodifluoromethane																		
Ethylbenzene																		
Methyl tert-butyl ether (MTBE)																		
Methylene chloride																		
Styrene																		
Tetrachloroethene																		
Toluene																		
trans-1,2-Dichloroethene																		
trans-1,3-Dichloropropene																		
Trichloroethene																		
Trichlorofluoromethane																		
Vinyl acetate																		
Vinyl chloride																		
Xylenes (total) <i>EPA 8270</i>																		
1,2,4-Trichlorobenzene																		
1,2-Dichlorobenzene																		
1,3-Dichlorobenzene																		
1,4-Dichlorobenzene																		
2,4,5-Trichlorophenol																		
2,4,6-Trichlorophenol																		
2,4-Dichlorophenol																		
2,4-Dinitrophenol																		
2,4-Dinitrophenols																		
2,4-Dinitrotoluene																		
2-Chloronaphthalene																		
2-Chlorophenol																		
2-Methyl-4,6-dinitrophenol																		
2-Methylnaphthalene																		
2-Methylphenol																		
2-Nitroaniline																		
2-Nitrophenol																		

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	Unit	20253-1397			20253-1398			20253-1399			20253-1400			20253-1401			
					ST-16A-SB-22	ST-16A-SB-22	05/12/00	ST-16A-SB-23	ST-16A-SB-23	05/12/00	Surface	Surface	Surface	ST-16A-SB-24	ST-16A-SB-24	05/12/00	ST-16A-SB-24	ST-16A-SB-25	05/12/00	
3,3'-Dichlorobenzidine				µg/kg	1400 U	1400	320	790 U	790	170	NA	1400 U	1400	360	390 U	390	86	NA		
3-Methyl-4-chlorophenol				µg/kg	1400 U	1400	480	790 U	790	260	NA	1400 U	1400	460	390 U	390	130	NA		
3-Nitroaniline				µg/kg	3600 U	3600	380	2000 U	2000	210	NA	3400 U	3400	360	970 U	970	100	NA		
4-Bromophenyl phenyl ether				µg/kg	1400 U	1400	340	790 U	790	190	NA	1400 U	1400	320	390 U	390	92	NA		
4-Chloroaniline				µg/kg	1400 U	1400	520	790 U	790	290	NA	1400 U	1400	500	390 U	390	140	NA		
4-Chlorophenyl phenyl ether				µg/kg	1400 U	1400	360	790 U	790	200	NA	1400 U	1400	340	390 U	390	96	NA		
4-Methylphenol				µg/kg	1400 U	1400	600	790 U	790	330	NA	1400 U	1400	580	390 U	390	160	NA		
4-Nitroaniline				µg/kg	3600 U	3600	300	2000 U	2000	170	NA	3400 U	3400	290	970 U	970	82	NA		
4-Nitrophenol				µg/kg	3600 U	3600	660	2000 U	2000	360	NA	3400 U	3400	630	970 U	970	180	NA		
Aceanaphthalene				µg/kg	1400 U	5400	2400	790 U	790	53	NA	1400 U	1400	430	390 U	390	52	NA		
Aceanaphthicene				µg/kg	1400 U	11000	2600	790 U	790	240	57	NA	NA	10000	2500	390 U	230	56	NA	
Aniline				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Antiracene				µg/kg	1400 U	1400	290	790 U	790	12	3.7	NA	NA	1400 U	1400	280	390 U	390	79	NA
Benzidine				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzofluoranthene				µg/kg	1800	1400	300	790 U	790	160	NA	NA	NA	860 J	1400	290	390 U	390	81	NA
Benzofluorene				µg/kg	2800 J	540	110	88 U	88	88	NA	NA	NA	1900	520	110	43 U	12	2.5	NA
Benzol[b]fluoranthene				µg/kg	5500 J	1100	110	790 U	790	150	NA	NA	NA	3900	1000	100	99 J	390	75	NA
Benzol[b]phenylene				µg/kg	2200 J	1400	180	790 U	790	98	NA	NA	NA	1800	1000	98	60 J	23	4.1	NA
Benzofluoranthene				µg/kg	2400 J	1400	300	790 U	790	160	NA	NA	NA	1200 J	520	67	390 U	390	80	NA
Benzonic acid				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzyl alcohol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Bis(2-chloroethoxy)methane				µg/kg	1400 U	1400	650	790 U	790	360	NA	1400 U	1400	620	390 U	390	170	NA		
Bis(2-chloroethyl)ether				µg/kg	1400 U	1400	600	790 U	790	330	NA	1400 U	1400	570	390 U	390	160	NA		
Bis(2-ethoxypropyl)ether				µg/kg	1400 U	1400	650	790 U	790	360	NA	1400 U	1400	620	390 U	390	170	NA		
Bis(2-ethylhexy)phthalate				µg/kg	1400 U	1400	370	790 U	790	200	NA	NA	NA	360 J	1400	350	390 U	390	100	NA
Bisphenol A				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Butyl benzyl phthalate				µg/kg	1400 U	1400	330	790 U	790	180	NA	1400 U	1400	320	390 U	390	89	NA		
Carbazole				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chrysene				µg/kg	3100	1400	350	790 U	790	12	1.8	NA	NA	1900	520	78	390 U	12	1.8	NA
Di-n-butyl phthalate				µg/kg	1400 U	1400	350	270 J	790	190	NA	1400 U	1400	230	230 J	390	94	NA		
Di-n-octyl phthalate				µg/kg	1400 UJ	1400	220	790 U	790	120	NA	1400 U	1400	210	390 U	390	59	NA		
Dibenz[a,h]anthracene				µg/kg	140 U	140	140	76 U	76	24	1.9	NA	NA	130 U	1000	320	38 U	23	7.3	NA
Dibenzofuran				µg/kg	1400 U	1400	450	790 U	790	250	NA	1400 U	1400	430	390 U	390	120	NA		
Diethyl phthalate				µg/kg	1400 U	1400	230	790 U	790	130	NA	1400 U	1400	220	390 U	390	63	NA		
Dimethyl phthalate				µg/kg	1400 U	1400	260	790 U	790	140	NA	1400 U	1400	250	390 U	390	70	NA		
Fluoranthene				µg/kg	3200	1400	330	790 U	790	24	5	NA	NA	1800	1000	130	390 U	23	3.1	NA
Fluorene				µg/kg	1400 U	1400	320	790 U	790	180	NA	1400 U	1400	450	390 U	390	23	10	NA	
Hexachlorobenzene				µg/kg	1400 U	1400	400	790 U	790	220	NA	1400 U	1400	380	390 U	390	110	NA		
Hexachlorobutadiene				µg/kg	1400 U	1400	610	790 U	790	330	NA	1400 U	1400	580	390 U	390	160	NA		
Hexachlorocyclopentadiene				µg/kg	1400 U	1400	770	790 U	790	430	NA	1400 U	1400	740	390 U	390	210	NA		

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	20253-1397 ST-16A-SB-22 05/12/00				20253-1398 ST-16A-SB-22 05/12/00				20253-1399 ST-16A-SB-23 05/12/00				20253-1400 ST-16A-SB-24 05/12/00				20253-1401 ST-16A-SB-24 05/12/00								
	Unit	Result Qtr. RDL MDL			Result Qtr. RDL MDL			Result Qtr. RDL MDL			Result Qtr. RDL MDL			Result Qtr. RDL MDL			Result Qtr. RDL MDL			Result Qtr. RDL MDL					
		Surface	2.0	Surface	2.0	Surface	2.0	Surface	2.0	Surface	2.0	Surface	2.0	Surface	2.0	Surface	2.0	Surface	2.0	Surface	2.0	Surface	2.0		
Hexachloroethane	µg/kg	1400 U	550	790 U	790	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Hydroquinone	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Indeno[1,2,3-cd]pyrene	µg/kg	2200 J	540	160	790	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Isophorone	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
N-Nitroso-di-i-propylamine	µg/kg	1400 U	1400	610	790 U	790	340	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
N-Nitrosodiphenylamine	µg/kg	1400 U	1400	310	790 U	790	170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Naphthalene	µg/kg	1400 U	1400	590	790 U	790	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Nitrobenzene	µg/kg	1400 U	1400	580	790 U	790	320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Pentachlorophenol	µg/kg	1400 U	1400	350	790 U	790	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Phenanthrene	µg/kg	1500	1100	110	790 U	790	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Phenol	µg/kg	1400 U	1400	690	790 U	790	380	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Pyrene	µg/kg	4300	1400	390	790 U	790	220	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Pyridine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
<i>EPA 8310</i>																									
Acenaphthene	µg/kg	5400 U	5400	2400	120 U	120	53	5400 U	5400	2400	5200 U	1400	430	120 U	120	52	11000 U	11000	4800	11000 U	11000	4800	11000 U	11000	
Acenaphthylene	µg/kg	11000 U	11000	2600	240 U	240	57	11000 U	11000	2600	10000 U	10000	2500	230 U	230	56	22000 U	22000	5100	22000 U	22000	5100	22000 U	22000	
Anthracene	µg/kg	540 U	1400	290	12 U	12	3.7	540 U	540	170	520 U	1400	280	12 U	12	390	79	1100 U	1100	330	1100 U	1100	330	1100 U	1100
Benz[a]anthracene	µg/kg	660	1400	300	26	790	160	830	540	65	620	1400	290	18	390	81	1300	1300	130	1300	1300	130	1300	1300	
Benz[b]fluoranthene	µg/kg	1300	540	110	70	88	88	1600	540	110	1400	520	110	42	12	2.5	2100	2100	230	2100	2100	230	2100	2100	
Benz[e]fluoranthene	µg/kg	1700	1100	110	73	790	150	2200	1100	110	1700	1000	1000	59	390	75	3900	3900	2200	2200	2200	2200	2200	2200	
Benzofluoropylene	µg/kg	1900	1400	180	90	790	98	2900	1100	100	2400	1000	98	77	23	4.1	5200	5200	200	5200	5200	200	5200	5200	
Benzol[k]fluoranthene	µg/kg	1100	1400	300	50	790	160	1600	540	71	1200	520	67	29	390	80	2500	2500	140	2500	2500	140	2500	2500	
Chrysene	µg/kg	880	1400	390	39	12	1.8	1000	540	82	900	520	78	25	12	1.8	1400	1400	160	1400	1400	160	1400	1400	
Dibenz[a,h]anthracene	µg/kg	1100 U	140	24	24	1.9	1100 U	1100	87	1000 U	1000	87	1000 U	1000	320	13 J	23	7.3	770 J	770 J	670	770 J	770 J		
Fluoranthene	µg/kg	1500	1400	330	25	24	5	2500	1100	140	2200	1000	130	57	23	3.1	3300	3300	280	3300	3300	280	3300	3300	
Fluorene	µg/kg	1100 U	1400	320	24	24	U	790	180	1100 U	1100	470	1000 U	1000	450	23 U	23	10	2200 U	2200 U	930	2200 U	2200 U		
Indeno[1,2,3-cd]pyrene	µg/kg	3300	540	160	160	160	100	4900	540	160	4300	1400	170	120	.82	6600	6600	1100	6600	6600	1100	6600	1100		
Naphthalene	µg/kg	5400 U	1400	590	120 U	790	320	5400 U	5400	1600	5200 U	1500	120 U	120	34	11000 U	11000	3100	11000 U	11000	3100	11000 U	11000		
Phenanthrene	µg/kg	500 J	1100	110	36	790	160	390 J	1100	110	440 J	1000	100	19 J	390	77	650 J	650 J	2200	650 J	650 J	2200	650 J	2200	
Pyrene	µg/kg	1700	1400	390	72	790	220	2000	1100	140	1800	1000	130	41	23	2.9	2600	2600	270	2600	2600	270	2600	2600	
Cyanide	mg/kg	0.54 U	.543	106	0.60 U	.597	.116	NA	NA	NA	0.52 U	.518	.101	0.59 U	.587	.114	NA	NA	NA	NA	NA	NA	NA	NA	

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	20253-1403				20253-1404				20253-1405				20253-1406				20253-1407			
				ST-16A-SB-26 05/12/00				ST-16A-SB-26 05/12/00				ST-16A-SB-27 05/12/00				ST-16A-SB-28 05/12/00				ST-16A-SB-28 05/12/00			
			Surface	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	
C4 LIFF 8015M																							
TPH as Diesel				mg/kg	300	10.5	.878	13	11.6	.968	NA		450	1.1	9.17	18	1.1	.927	NA				
TPH as Gasoline				mg/kg	1.1 U	1.05	.0211	1.2 U	1.16	.0232	NA		1.1 U	1.1	.022	NA	1.1	.0222	NA				
Unknown Hydrocarbons				mg/kg	NA			NA			NA		NA			NA			NA				
EPA 6010																							
Aluminum				mg/kg	13000	52.6	1.06	22000 J	58	1.17	NA		16000	55	1.11	18000	55.6	1.12	NA				
Antimony				mg/kg	11 U	10.5	5.63	12 U	11.6	6.21	NA		11 U	11	.589	11 U	11.1	5.94	NA				
Arsenic				mg/kg	6.3	.53	.29	10	.58	.32	NA		14	.55	.31	6.8	.56	.31	NA				
Barium				mg/kg	110	1.05	.004	160	1.16	.005	NA		140	1.1	.004	130	1.11	.004	NA				
Beryllium				mg/kg	0.48	.21	0.01	.84	.23	0.01	NA		0.59	.22	0.01	.66	.22	0.01	NA				
Cadmium				mg/kg	1.4	1.05	.111	1.2 U	1.16	1.12	NA		1.1 U	1.1	.111	1.1 U	1.11	.111	NA				
Calcium				mg/kg	9100	105	2.37	13000	116	2.61	NA		23000	110	2.48	130000	111	2.50	NA				
Chromium				mg/kg	28	1.05	.58	25	1.16	.64	NA		29	1.1	.61	20	1.11	.61	NA				
Cobalt				mg/kg	6.4	2.11	.888	10	2.32	.97	NA		7.6	2.2	.92	8.5	2.22	.93	NA				
Copper				mg/kg	21	1.05	.15	30	1.16	1.16	NA		27	1.1	.15	24	1.11	.16	NA				
Iron				mg/kg	19000	5.26	.61	30000 J	5.8	.67	NA		22000	5.5	.64	25000	5.56	.64	NA				
Lead				mg/kg	63	.32	.009	12	.35	.10	NA		54	.33	.009	12	.33	.009	NA				
Magnesium				mg/kg	6700	105	.82	12000	116	6.42	NA		8700	110	6.08	8800	111	6.14	NA				
Manganese				mg/kg	330	2.11	.13	440	2.32	.14	NA		350	2.2	.13	360	2.22	.13	NA				
Molybdenum				mg/kg	2.1 U	2.11	0.64	2.3 U	2.32	0.71	NA		2.2 U	2.2	.67	2.2 U	2.22	.68	NA				
Nickel				mg/kg	14	2.11	0.65	20	2.32	0.72	NA		15	2.2	.68	17	2.22	.69	NA				
Potassium				mg/kg	2900	105	55.0	4200	116	60.6	NA		3700	110	57.5	30000	111	58.0	NA				
Selenium				mg/kg	0.53 U	.53	.25	.058 U	.58	.28	NA		0.55 U	.55	.26	.036 U	.56	.27	NA				
Silver				mg/kg	1.1 U	1.05	.86	1.2 U	1.16	.95	NA		1.1 U	1.1	.90	1.1 U	1.11	.91	NA				
Sodium				mg/kg	210	105	0	370	116	0	NA		300	110	0	270	111	0	NA				
Thallium				mg/kg	1.8	1.05	.36	2.6	1.16	.40	NA		2.3	1.1	.38	2.1	1.11	.38	NA				
Tin				mg/kg	NA			NA			NA		NA			NA			NA				
Vanadium				mg/kg	37	1.05	.41	.55	1.16	.45	NA		40	1.1	.43	45	1.11	.43	NA				
Zinc				mg/kg	320	2.11	.18	110	2.32	.20	NA		110	2.2	.19	82	2.22	.19	NA				
Mercury				mg/kg	0.11 U	.105	.0295	0.12 U	.116	.0325	NA		0.11 U	.11	.0308	0.11 U	.111	.0311	NA				
EPA 7471A																							
EPA 8081																							
4,4'-DDD				µg/kg	63 U	63	.24	3.5 U	3.5	1.3	NA		66 U	66	15	3.3 U	3.3	.74	NA				
4,4'-DDT				µg/kg	63 U	63	.25	3.5 U	3.5	.77	NA		66 U	66	26	3.3 U	3.3	1.3	NA				
Aldrin				µg/kg	320 U	320	5.4	1.7 U	17	.3	NA		330 U	330	5.6	17 U	17	.28	NA				
alpha-BHC				µg/kg	32 U	32	12	1.7 U	1.7	.65	NA		33 U	33	12	1.7 U	1.7	.62	NA				
alpha-Chlordane				µg/kg	320 U	690 U	7.1	17 U	17	.39	NA		330 U	730 U	7.4	17 U	17	.37	NA				
Aroclor-1016				µg/kg	690 U	690	90	38 U	38	5	NA		730 U	730 U	94	37 U	37	4.8	NA				
Aroclor-1221				µg/kg	690 U	170	38 U	38	9.1	NA		730 U	730 U	170	37 U	37	8.7	NA					

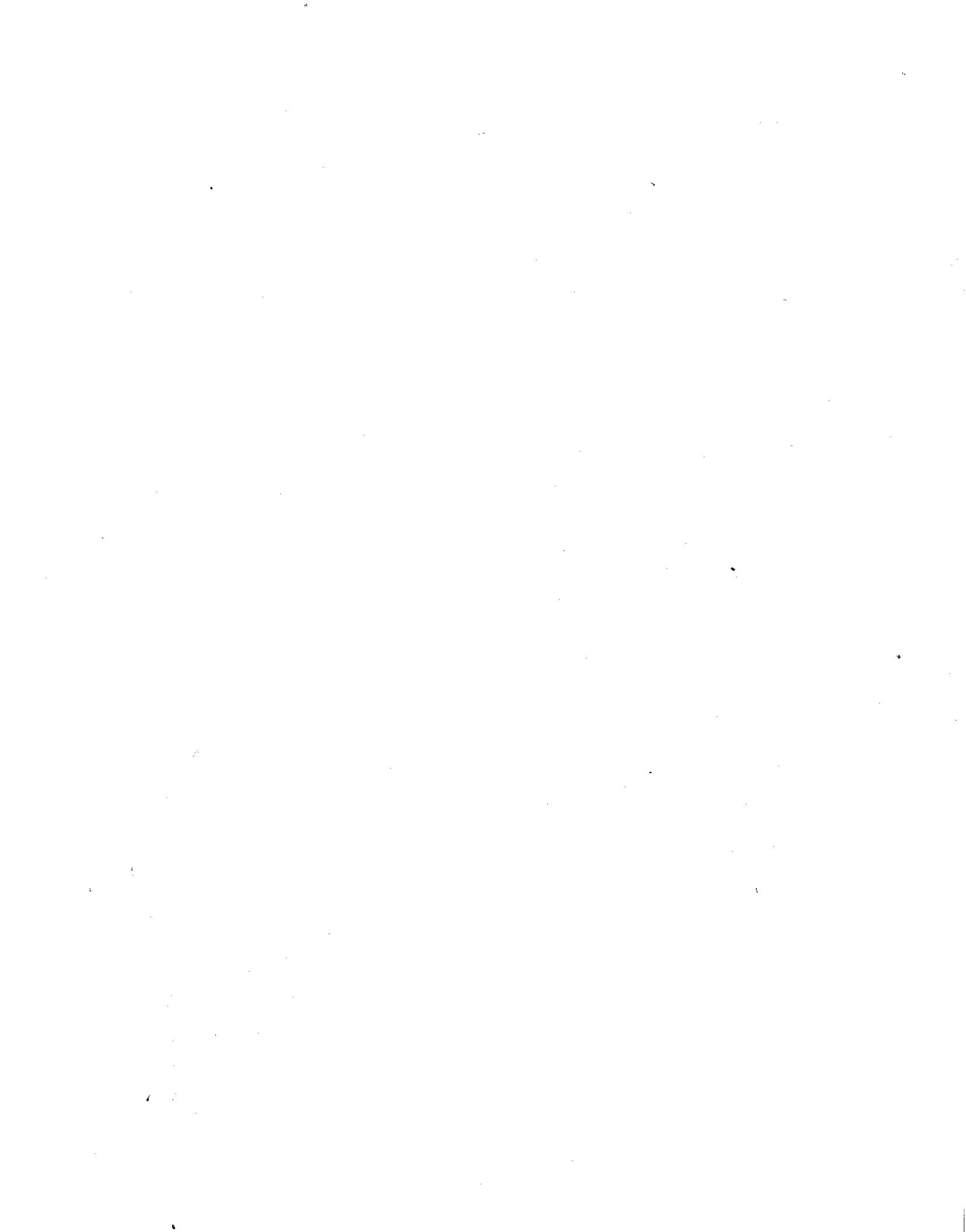


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1403	20253-1404	20253-1405	20253-1406	20253-1407	20253-1408
Location Code	ST-16A-SB-26 05/12/00 Surface	ST-16A-SB-26 05/12/00 2.0	ST-16A-SB-27 05/12/00 Surface	ST-16A-SB-28 05/12/00 2.0	ST-16A-SB-28 05/12/00 Surface	ST-16A-SB-29 05/12/00 Surface
Date Sampled	05/12/00	05/12/00	05/12/00	05/12/00	05/12/00	05/12/00
Depth (feet below ground surface)						
CA LUFT 8015M						
TPH as Diesel	mg/kg	300	10.5	.878	13	11.6
TPH as Gasoline	mg/kg	1.1 U	1.05	.0211	1.2 U	NA
Unknown Hydrocarbons	mg/kg	NA			NA	NA
EPA 6010						
Aluminum	mg/kg	13000	52.6	1.06	22000 J	58
Antimony	mg/kg	11 U	10.5	5.63	12 UJ	NA
Arsenic	mg/kg	6.3	.53	.29	10	.58
Barium	mg/kg	110	1.05	.04	160	1.16
Beryllium	mg/kg	0.48	21	.01	.84	.23
Cadmium	mg/kg	1.4	1.05	.11	1.2 U	1.16
Calcium	mg/kg	9100	105	2.37	13000	116
Chromium	mg/kg	28	1.05	.58	25	1.16
Cobalt	mg/kg	6.4	2.11	.88	10	2.32
Copper	mg/kg	21	1.05	.15	30	1.16
Iron	mg/kg	19000	5.26	.61	30000 J	5.8
Lead	mg/kg	63	.32	.099	12	.35
Magnesium	mg/kg	6700	105	5.82	12000	116
Manganese	mg/kg	330	2.11	.13	440	2.32
Molybdenum	mg/kg	2.1 U	2.11	.64	2.3 U	2.32
Nickel	mg/kg	14	2.11	.65	20	2.32
Potassium	mg/kg	2900	105	55.0	4200	116
Selenium	mg/kg	0.53 U	.53	.25	0.58 U	.58
Silver	mg/kg	1.1 U	1.05	.86	1.2 U	1.16
Sodium	mg/kg	210	105	0	370	116
Thallium	mg/kg	1.8	1.05	.36	2.6	1.16
Tin	mg/kg	NA			NA	NA
Vanadium	mg/kg	37	1.05	.41	55	1.16
Zinc	mg/kg	320	2.11	.18	110	2.32
EPA 7471A						
Mercury	mg/kg	0.11 U	.105	.0295	0.12 U	1.16
EPA 8081						
4,4'-DDD	mg/kg	63 U	63	.24	3.5 U	3.5
4,4'-DDE	mg/kg	63 U	14	.14	3.5 U	.77
4,4'-DDT	mg/kg	63 U	63	.25	3.5 U	1.4
Aldrin	mg/kg	320 U	54	17	17	3
alpha-BHC	mg/kg	32 U	32	12	1.7 U	.65
alpha-Chlordane	mg/kg	320 U	320	7.1	17 U	.39
Aroclor-1016	mg/kg	690 U	690	90	38 U	.38
Aroclor-1221	mg/kg	690 U	690	170	38 U	9.1

SWDIV Contract No. N68711-93-D-1459, DO 0113

OHM Project No. 20253, DCN SWXXXX



Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	20253-1403 ST-16A-SE-26 05/12/00			20253-1404 ST-16A-SB-26 05/12/00			20253-1405 ST-16A-SB-27 05/12/00			20253-1406 ST-16A-SB-28 05/12/00			20253-1407 ST-16A-SB-28 05/12/00			20253-1408 ST-16A-SB-29 05/12/00		
	Surface			2.0 Surface			Surface			2.0 Surface			2.0 Surface			2.0 Surface		
	Unit	Result Qtr	MDL	Result Qtr	MDL	Result Qtr	MDL	Result Qtr	MDL	Result Qtr	MDL	Result Qtr	MDL	Result Qtr	MDL	Result Qtr	MDL	
Aroclor-1232	$\mu\text{g}/\text{kg}$	690 U	91	38 U	.38	5	NA	NA	NA	730 U	.95	37 U	.37	4.8	NA	NA	NA	
Aroclor-1242	$\mu\text{g}/\text{kg}$	690 U	60	38 U	.38	3.3	NA	NA	NA	730 U	.63	37 U	.37	3.2	NA	NA	NA	
Aroclor-1248	$\mu\text{g}/\text{kg}$	690 U	60	38 U	.38	3.3	NA	NA	NA	730 U	.63	37 U	.37	3.2	NA	NA	NA	
Aroclor-1254	$\mu\text{g}/\text{kg}$	690 U	65	38 U	.38	3.6	NA	NA	NA	730 U	.68	37 U	.37	3.4	NA	NA	NA	
Aroclor-1260	$\mu\text{g}/\text{kg}$	690 U	58	38 U	.38	3.2	NA	NA	NA	730 U	.61	37 U	.37	3.1	NA	NA	NA	
Beta-BHC	$\mu\text{g}/\text{kg}$	320 U	11	17 U	.17	.63	NA	NA	NA	330 U	.12	17 U	.17	.37	NA	NA	NA	
Delta-BHC	$\mu\text{g}/\text{kg}$	320 U	7.8	17 U	.17	.43	NA	NA	NA	330 U	.81	17 U	.17	.41	NA	NA	NA	
Dieldrin	$\mu\text{g}/\text{kg}$	63 U	30	3.5 U	.35	1.6	NA	NA	NA	66 U	.66	31	3.3 U	3.3	1.6	NA	NA	NA
Endosulfan I	$\mu\text{g}/\text{kg}$	32 U	32	15	1.7 U	.72	NA	NA	NA	33 U	.33	15	1.7 U	1.7	.78	NA	NA	NA
Endosulfan II	$\mu\text{g}/\text{kg}$	63 U	63	17	3.5 U	.35	.94	NA	NA	66 U	.66	18	3.3 U	3.3	.9	NA	NA	NA
Endosulfan sulfate	$\mu\text{g}/\text{kg}$	63 U	63	17	3.5 U	.35	.91	NA	NA	66 U	.66	17	3.3 U	3.3	.87	NA	NA	NA
Endrin	$\mu\text{g}/\text{kg}$	63 U	29	3.5 U	.35	1.6	NA	NA	NA	66 U	.66	30	3.3 U	3.3	1.5	NA	NA	NA
Endrin aldehyde	$\mu\text{g}/\text{kg}$	63 U	18	3.5 U	.35	1	NA	NA	NA	66 U	.66	19	3.3 U	3.3	.83	NA	NA	NA
gamma-BHC	$\mu\text{g}/\text{kg}$	320 U	13	17 U	.17	.72	NA	NA	NA	330 U	.330	14	17 U	17	.69	NA	NA	NA
gamma-Chlordane	$\mu\text{g}/\text{kg}$	320 U	6.8	17 U	.17	.33	NA	NA	NA	330 U	.330	7.1	17 U	17	.32	NA	NA	NA
Hexamachlor	$\mu\text{g}/\text{kg}$	42 U	42	11	2.3 U	.23	.62	NA	NA	44 U	.44	12	2.2 U	2.2	.59	NA	NA	NA
Heptachlor epoxide	$\mu\text{g}/\text{kg}$	42 U	42	7.1	2.3 U	.23	.39	NA	NA	44 U	.44	7.4	2.2 U	2.2	.37	NA	NA	NA
Methoxychlor	$\mu\text{g}/\text{kg}$	320 UJ	140	17 U	.17	8.2	NA	NA	NA	330 UJ	.330	150	17 U	17	7.8	NA	NA	NA
Toxaphene	<i>EPA 8260A</i>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,1,1-Trichloroethane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.45	5.8 U	.58	.49	NA	NA	5.5 U	.55	.47	5.6 U	5.6	.47	NA	NA	NA
1,1,2,2-Tetrachloroethane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.6	5.8 U	.58	.66	NA	NA	5.5 UJ	.55	.63	5.6 U	5.6	.63	NA	NA	NA
1,1,2-Trichloro-1,2,2-trifluoroethane	$\mu\text{g}/\text{kg}$	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.47	5.8 U	.58	.52	NA	NA	5.5 U	.55	.5	5.6 U	5.6	.5	NA	NA	NA
1,1-Dichloroethane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.37	5.8 U	.58	.41	NA	NA	5.5 U	.55	.39	5.6 U	5.6	.39	NA	NA	NA
1,1-Dichloroethene	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.97	5.8 U	.58	.1	NA	NA	5.5 U	.55	.1	5.6 U	5.6	.1	NA	NA	NA
1,2,3-Trichloropropane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.57	5.8 U	.58	.63	NA	NA	5.5 U	.55	.6	5.6 U	5.6	.6	NA	NA	NA
1,2-Dichloroethane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.65	5.8 U	.58	.72	NA	NA	5.5 U	.55	.68	5.6 U	5.6	.69	NA	NA	NA
1,2-Dichloropropane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.35	5.8 U	.58	.39	NA	NA	5.5 U	.55	.37	5.6 U	5.6	.37	NA	NA	NA
2-Butanone (MEK)	$\mu\text{g}/\text{kg}$	53 U	53	.35	58 U	.58	.38	NA	NA	55 U	.55	.36	56 U	56	.36	NA	NA	NA
2-Chloroethyl vinyl ether	$\mu\text{g}/\text{kg}$	53 UJ	53	.34	5.8 UJ	.58	.37	NA	NA	55 U	.55	.35	56 U	56	.36	NA	NA	NA
2-Hexanone	$\mu\text{g}/\text{kg}$	53 U	53	.34	58 U	.58	.38	NA	NA	55 U	.55	.36	56 U	56	.36	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	$\mu\text{g}/\text{kg}$	53 U	53	.3	58 U	.58	.33	NA	NA	55 U	.55	.31	56 U	56	.32	NA	NA	NA
Acetone	$\mu\text{g}/\text{kg}$	53 U	53	.5	58 U	.58	.55	NA	NA	55 U	.55	.52	56 U	56	.53	NA	NA	NA
Benzene	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.22	5.8 U	.58	.25	NA	NA	5.5 U	.55	.23	5.6 U	5.6	.24	NA	NA	NA
Bromodichloromethane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.56	5.8 U	.58	.62	NA	NA	5.5 U	.55	.59	5.6 U	5.6	.59	NA	NA	NA
Bromoform	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.99	5.8 U	.58	.1	NA	NA	5.5 U	.55	1	5.6 U	5.6	1	NA	NA	NA
Bromomethane	$\mu\text{g}/\text{kg}$	5.3 U	5.3	1.1	5.8 U	.58	1.2	NA	NA	5.5 U	.55	1.1	5.6 U	5.6	1.1	NA	NA	NA
Carbon disulfide	$\mu\text{g}/\text{kg}$	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Carbon tetrachloride	$\mu\text{g}/\text{kg}$	5.3 U	5.3	.54	5.8 U	.58	.6	NA	NA	5.5 U	.55	.56	5.6 U	5.6	.57	NA	NA	NA

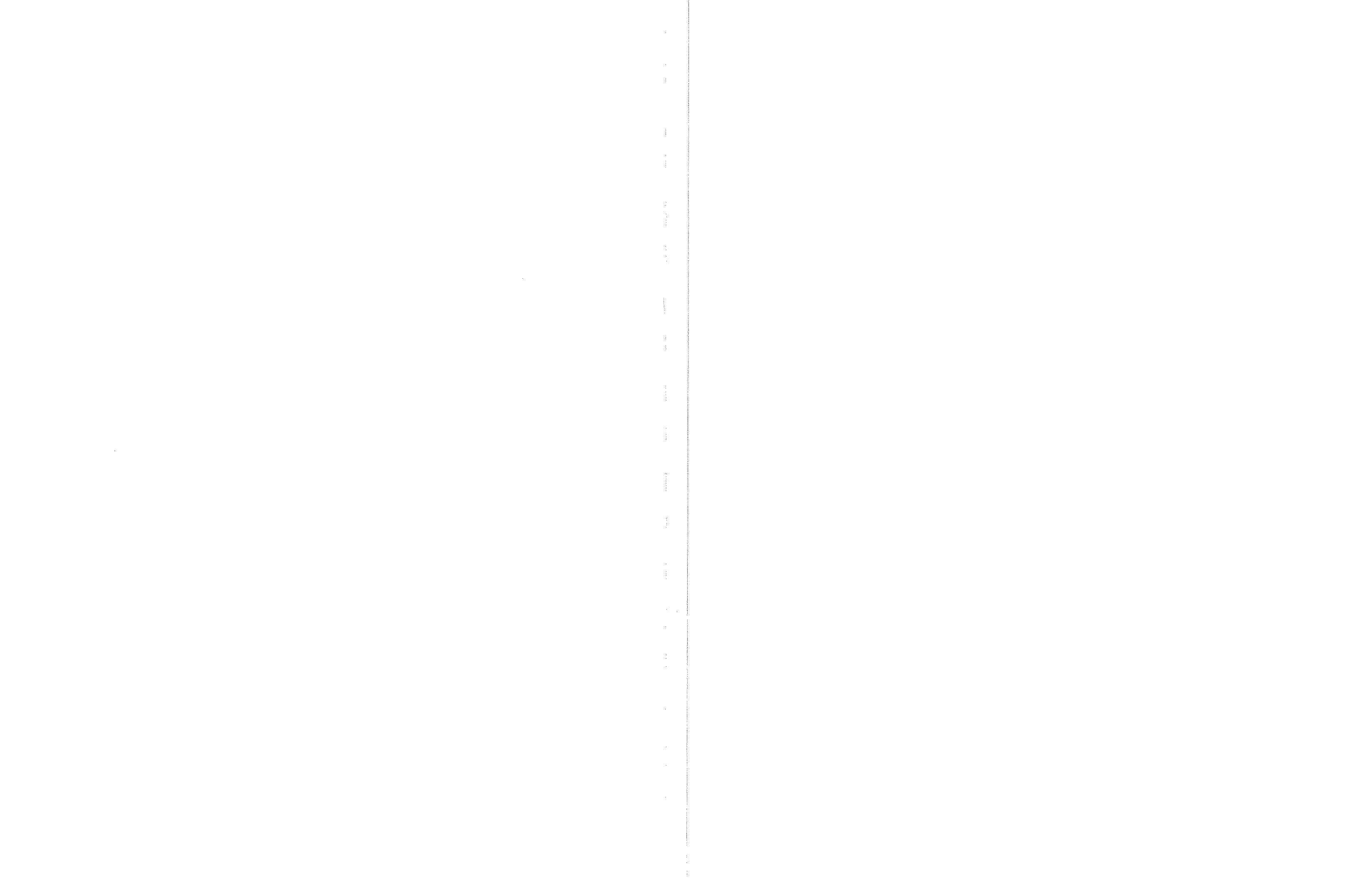


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	ST-16A-SB-26 05/12/00				ST-16A-SB-26 05/12/00				ST-16A-SB-27 05/12/00				ST-16A-SB-28 05/12/00				ST-16A-SB-28 05/12/00				2.0 Surface									
	Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL		
Chlorobenzene	µg/kg	5.3 U	.33	.37	5.8 U	.58	.37	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Chloroethane	µg/kg	5.3 U	5.3	2.1	5.8 U	5.8	2.3	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Chloroform	µg/kg	5.3 U	5.3	.45	5.8 U	5.8	.5	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Chloronaphthalene	µg/kg	5.3 U	.97	.97	5.8 U	5.8	1.1	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
cis-1,2-Dichloroethene	µg/kg	5.3 U	.53	.52	5.8 U	5.8	.57	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
cis-1,3-Dichloropropene	µg/kg	5.3 U	.53	.59	5.8 U	5.8	.65	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Dibromoethane	µg/kg	5.3 U	.54	.58	5.8 U	5.8	.59	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Dichlorodifluoromethane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Ethylbenzene	µg/kg	5.3 U	.3	.36	5.8 U	5.8	.33	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Methyl tert-butyl ether (MTBE)	µg/kg	11 U	.11	.64	12 U	.12	.71	NA	NA	NA	11 U	.11	.67	11 U	.11	.68	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Methylene chloride	µg/kg	5.3 U	.95	.62	5.8	1	NA	NA	NA	NA	5.5 U	.99	.58	5.5 U	.99	.58	5.5 U	.99	.58	5.5 U	.99	.58	5.5 U	.99	.58	5.5 U	.99	.58		
Styrene	µg/kg	5.3 U	.29	.58	5.8 U	5.8	.32	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Tetrachloroethene	µg/kg	5.3 U	.46	.58	5.8 U	5.8	.51	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Toluene	µg/kg	5.3 U	.36	.58	5.8 U	5.8	.4	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
trans-1,2-Dichloroethene	µg/kg	5.3 U	.12	.58	5.8 U	5.8	.13	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
trans-1,3-Dichloropropene	µg/kg	5.3 U	.76	.58	5.8 U	5.8	.83	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Trichloroethene	µg/kg	5.3 U	.54	.58	5.8 U	5.8	.6	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Trichlorofluoromethane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Vinyl acetate	µg/kg	5.3 U	.53	.29	5.8 U	5.8	.31	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Vinyl chloride	µg/kg	5.3 U	.81	.58	5.8 U	5.8	.39	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
Xylenes (total)	µg/kg	5.3 U	.53	1.5	5.8 U	5.8	1.6	NA	NA	NA	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U	5.5 U			
EPA 8270																														
1,2,4-Trichlorobenzene	µg/kg	1400 U	1400	570	380 U	380	160	NA	NA	NA	730 U	730	300	300	370 U	370	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	µg/kg	1400 U	1400	540	380 U	380	150	NA	NA	NA	730 U	730	280	280	370 U	370	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	µg/kg	1400 U	1400	530	380 U	380	150	NA	NA	NA	730 U	730	280	280	370 U	370	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	µg/kg	1400 U	1400	490	380 U	380	140	NA	NA	NA	730 U	730	260	260	370 U	370	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,5-Trichlorophenol	µg/kg	3500 U	3500	340	960 U	960	94	NA	NA	NA	1800 U	1800	180	180	920 U	920	90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol	µg/kg	1400 U	1400	500	380 U	380	140	NA	NA	NA	730 U	730	260	260</																

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	20253-1403			20253-1404			20253-1405			20253-1406			20253-1407			20253-1408				
	ST-16A-SB-26 05/12/00 Surface			ST-16A-SB-26 05/12/00 2.0			ST-16A-SB-27 05/12/00 Surface			ST-16A-SB-28 05/12/00 Surface			ST-16A-SB-28 05/12/00 2.0			ST-16A-SB-29 05/12/00 Surface				
	Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	
3,3'-Dichlorobenzidine	µg/kg	1400 U	1400	310	380 U	380	85	NA	NA	NA	730 U	730	160	370 U	370	81	NA	NA	NA	
3-Methyl-4-chlorophenol	µg/kg	1400 U	1400	460	380 U	380	130	NA	NA	NA	730 U	730	240	370 U	370	120	NA	NA	NA	
3-Nitroaniline	µg/kg	3500 U	3500	370	960 U	960	100	NA	NA	NA	1800 U	1800	190	920 U	920	97	NA	NA	NA	
4-Bromophenyl phenyl ether	µg/kg	1400 U	1400	330	380 U	380	90	NA	NA	NA	730 U	730	170	370 U	370	87	NA	NA	NA	
4-Chloroaniline	µg/kg	1400 U	1400	510	380 U	380	140	NA	NA	NA	730 U	730	260	370 U	370	130	NA	NA	NA	
4-Chlorophenyl phenyl ether	µg/kg	1400 U	1400	350	380 U	380	95	NA	NA	NA	730 U	730	180	370 U	370	91	NA	NA	NA	
4-Methylphenol	µg/kg	1400 U	1400	590	380 U	380	160	NA	NA	NA	730 U	730	310	370 U	370	150	NA	NA	NA	
4-Nitroaniline	µg/kg	3500 U	3500	290	960 U	960	81	NA	NA	NA	1800 U	1800	150	920 U	920	78	NA	NA	NA	
4-Nitrophenol	µg/kg	3500 U	3500	640	960 U	960	180	NA	NA	NA	1800 U	1800	330	920 U	920	170	NA	NA	NA	
Aceanaphthalene	µg/kg	1400 U	1400	440	380 U	380	52	NA	NA	NA	730 U	730	1100	490	370 U	370	120	NA	NA	NA
Acenaphthylene	µg/kg	1400 U	21000	5000	380 U	380	120	NA	NA	NA	730 U	730	230	370 U	370	53	NA	NA	NA	
Aniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Anthracene	µg/kg	500 J	1400	280	380 U	380	78	NA	NA	NA	730 U	730	110	34	370 U	11	34	NA	NA	NA
Benzidine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzofluoranthene	µg/kg	3700	1400	290	380 U	380	80	NA	NA	NA	730 U	730	150	370 U	370	77	NA	NA	NA	
Benzofluoranthene	µg/kg	6100	1600	430	43	43	NA	NA	NA	81	81	81	41 U	41 U	11	2.3	NA	NA	NA	
Benzofluoranthene	µg/kg	8900	1400	270	380 U	23	2.3	NA	NA	NA	210 J	730	140	370 U	370	22	2.2	NA	NA	NA
Benzofluoroprene	µg/kg	3100	1400	170	380 U	380	48	NA	NA	NA	120 J	730	90	370 U	370	22	2.1	NA	NA	NA
Benzofluoranthene	µg/kg	5200	1400	290	380 U	12	1.5	NA	NA	NA	730 U	730	150	370 U	370	76	NA	NA	NA	NA
Benzoic acid	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Benzyl alcohol	µg/kg	1400 U	1400	630	380 U	380	170	NA	NA	NA	730 U	730	330	370 U	370	170	NA	NA	NA	
Bis(2-chlorooxy)methane	µg/kg	1400 U	1400	580	380 U	380	160	NA	NA	NA	730 U	730	500	370 U	370	150	NA	NA	NA	
Bis(2-chloroethyl)ether	µg/kg	1400 U	1400	630	380 U	380	170	NA	NA	NA	730 U	730	330	370 U	370	170	NA	NA	NA	
Bis(2-chloroisopropyl)ether	µg/kg	650 J	1400	360	380 U	380	99	NA	NA	NA	730 U	730	190	370 U	370	94	NA	NA	NA	
Bisphenol A	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Butyl benzyl phthalate	µg/kg	330 J	1400	320	380 U	380	88	NA	NA	NA	730 U	730	170	370 U	370	84	NA	NA	NA	
Carbazole	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Chrysene	µg/kg	6700	1400	380	380 U	12	1.7	NA	NA	NA	730 U	730	200	370 U	370	11	1.7	NA	NA	NA
Di-n-butyl phthalate	µg/kg	400 J	1400	340	250 J	380	93	NA	NA	NA	450 J	730	180	270 J	370	89	NA	NA	NA	NA
Di- <i>n</i> -octyl phthalate	µg/kg	1400 U	1400	210	380 U	380	58	NA	NA	NA	730 U	730	110	370 U	370	56	NA	NA	NA	NA
Dibenz[a,h]anthracene	µg/kg	900	2100	650	37 U	37	NA	NA	NA	70 U	70	70	36 U	36	22	1.8	NA	NA	NA	
Dibenzofuran	µg/kg	1400 U	1400	440	380 U	380	120	NA	NA	NA	730 U	730	230	370 U	370	120	NA	NA	NA	NA
Diethyl phthalate	µg/kg	1400 U	1400	230	380 U	380	63	NA	NA	NA	730 U	730	120	170 J	370	60	NA	NA	NA	NA
Dimethyl phthalate	µg/kg	6600	1400	320	380 U	380	70	NA	NA	NA	730 U	730	130	370 U	370	67	NA	NA	NA	NA
Fluoranthene	µg/kg	1400 U	2100	910	380 U	23	10	NA	NA	NA	730 U	730	160	370 U	370	22	9.6	NA	NA	NA
Hexachlorobutadiene	µg/kg	1400 U	1400	380	380 U	380	110	NA	NA	NA	730 U	730	200	370 U	370	100	NA	NA	NA	NA
Hexachlorocyclopentadiene	µg/kg	1400 U	1400	590	380 U	380	160	NA	NA	NA	730 U	730	310	370 U	370	160	NA	NA	NA	NA
				750	380 U	380	210				730 U	730	390	370 U	370	200				



Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	20253-1403	20253-1404	ST-16A-SB-26	ST-16A-SB-26	20253-1405	ST-16A-SB-27	05/12/00	20253-1406	ST-16A-SB-28	05/12/00	20253-1407	ST-16A-SB-28	05/12/00	20253-1408	ST-16A-SB-29	05/12/00	Surface		
				Unit	Result Qlfir	RDL	MDL	Result Qlfir	RDL	MDL	Result Qlfir	RDL	MDL	Result Qlfir	RDL	MDL	Result Qlfir	RDL	MDL	Surface		
Hexachloroethane				µg/kg	1400 U	1400	530	380 U	380	150	NA	NA	NA	730 U	730	280	370 U	370	140	NA		
Hydroquinone				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Indeno[1,2,3-cd]pyrene				µg/kg	1100	74	380 U	380	49	NA	NA	NA	120 J	730	92	370 U	11	.78	NA	NA		
Isophorone				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
N-Nitrosodimethylamine				µg/kg	1400 U	1400	590	380 U	380	160	NA	NA	NA	730 U	730	310	370 U	370	160	NA		
N-Nitrosodiphenylamine				µg/kg	1400 U	1400	300	380 U	380	94	NA	NA	NA	730 U	730	160	370 U	370	80	NA		
Naphthalene				µg/kg	1400 U	1400	570	380 U	380	160	NA	NA	NA	730 U	730	300	370 U	110	.32	NA		
Nitrobenzene				µg/kg	1400 U	1400	560	380 U	380	160	NA	NA	NA	730 U	730	290	370 U	150	NA	NA		
Pentachlorophenol				µg/kg	1400 U	1400	340	380 U	380	93	NA	NA	NA	730 U	730	180	370 U	370	.89	NA		
Phenanthrene				µg/kg	3200	2100	210	380 U	380	77	NA	NA	NA	730 U	730	220	50	370 U	22	5	NA	
Phenol				µg/kg	1400 U	1400	670	380 U	380	190	NA	NA	NA	730 U	730	350	370 U	370	.180	NA		
Pyrene				µg/kg	8300	1400	380	380 U	23	2.9	NA	NA	NA	730 U	730	200	370 U	370	100	NA		
Pyridine	EPA 8310			µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Acenaphthene				µg/kg	11000 U	1400	440	120 U	120	52	11000 U	11000	4700	1100 U	1100	490	110 U	370	120	5400 U	5400	2400
Acenaphthylene				µg/kg	210000 U	210000	5000	230 U	380	120	210000 U	210000	5000	2200 U	2200	230	220 U	220	.53	11000 U	11000	2600
Anthracene				µg/kg	1100 U	1400	280	12 U	380	.78	1100 U	1100	330	110 U	110	.34	11 U	11	.34	540 U	540	170
Benzofluoranthene				µg/kg	1700	1400	290	9.2 J	380	80	1200	1100	130	51 J	730	150	11 U	370	.77	620	540	65
Benzol[a]pyrene				µg/kg	3300	160	160	13	43	43	2300	1100	220	120	81	81	11 U	11	2.3	1100	540	110
Benzol[b]fluoranthene				µg/kg	3600	1400	270	18 J	23	2.3	2800	2100	210	170 J	730	140	22 U	22	2.2	1400	1100	110
Benzol[g]phenanthrene				µg/kg	4000	1400	170	26	380	.48	3300	2100	200	360	730	90	22 U	22	2.1	1700	1100	100
Benzol[k]fluoranthene				µg/kg	2900	1400	290	12	12	1.5	2100	1100	140	76 J	730	150	11 U	370	.76	1100	540	70
Chrysene				µg/kg	2300	1400	380	12	12	1.7	1500	1100	160	55 J	730	200	11 U	11	1.7	740	540	81
Dibenz[a,h]anthracene				µg/kg	2100 U	2100	650	23 U	37	.37	2100 U	2100	170	220 U	70	70	22 U	22	1.8	1100 U	1100	340
Fluoranthene				µg/kg	6200	1400	320	32	23	3	4200	2100	270	220 U	220	46	22 U	22	2.9	1300	1100	230
Fluorene				µg/kg	2100 U	2100	910	23 U	23	10	2100 U	2100	900	220 U	730	160	22 U	22	9.6	1100 U	1100	460
Indeno[1,2,3-cd]pyrene				µg/kg	5000	11000	74	47	380	.49	5800	11000	320	440	730	92	11 U	11	.78	3200	540	160
Naphthalene				µg/kg	11000 U	1400	570	120 U	380	160	11000 U	11000	3000	110 U	110	32	5400 U	5400	1600	5400 U	5400	1600
Phenanthrene				µg/kg	1500 J	2100	210	15 J	380	.77	820 J	2100	210	220 U	220	50	22 U	22	5	380 J	1100	110
Pyrene	EPA 8310			µg/kg	4700	1400	380	23 U	23	.3500	2100	260	120 J	730	200	22 U	370	100	1600	1100	140	
Cyanide	EPA 9010			mg/kg	0.53 U	526	103	0.58 U	.53	.113	NA	NA	NA	0.55 U	.55	.107	0.56 U	.556	.108	NA	NA	NA

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1409 ST-16A-SB-30 05/12/00 Surface				20253-1410 ST-16A-SB-30 05/12/00 Surface				20253-1419 ST-16A-SB-31 05/23/00 Surface				20253-1420 ST-16A-SB-32 05/23/00 Surface				20253-1421 ST-16A-SB-33 05/23/00 Surface				
	Unit	Result	Qlf/r	RDL	MDL	Result	Qlf/r	RDL	MDL	Result	Qlf/r	RDL	MDL	Result	Qlf/r	RDL	MDL	Result	Qlf/r	RDL	MDL
TPH as Diesel	mg/kg	66	10.7	.894	12	11.1	.923	NA		11 U	10.8	.904	11 U	.922	11 U	10.9	.906				
TPH as Gasoline	mg/kg	1.1 U	1.07	.0214	1.1 U	1.11	.0221	NA		1.1 U	1.08	.0217	1.1 U	.0221	1.1 U	1.09	.0217				
Unknown Hydrocarbons	mg/kg	NA			NA			NA		NA			NA		NA			NA			
<i>EPA 6010</i>																					
Aluminum	mg/kg	17000	53.6	1.08	17000	55.3	1.12	NA		20000	54.2	1.09	17000	55.2	1.12	20000	54.3	1.10			
Antimony	mg/kg	11 U	10.7	5.73	11 U	11.1	5.92	NA		11 U	10.8	5.80	11 U	11 U	10.9	5.81					
Arsenic	mg/kg	7.4	.54	0.30	9.6	.55	0.31	NA		7.4	.54	0.30	6.5	.55	0.31	7.8	.54	0.30			
Barium	mg/kg	150	1.07	0.04	140	1.11	0.04	NA		150	1.08	0.04	130	1.1	0.04	150	1.09	0.04			
Beryllium	mg/kg	.67	.21	0.01	.65	.22	0.01	NA		.72	.22	0.01	.58	.22	0.01	.68	.22	0.01			
Cadmium	mg/kg	1.1 U	1.07	0.11	1.1 U	1.11	0.11	NA		1.1 U	1.08	0.11	1.1 U	1.1 U	1.09	0.11					
Calcium	mg/kg	12000	107	2.41	7400	111	2.49	NA		19000	108	2.44	16000	110	2.49	30000	109	2.44			
Chromium	mg/kg	21	1.07	0.59	19	1.11	0.61	NA		24	1.08	0.60	21	1.1	0.61	21	1.09	0.60			
Cobalt	mg/kg	9.0	2.14	0.90	8.8	2.21	0.93	NA		8.5	2.17	0.91	7.1	2.21	0.93	8.0	2.17	0.91			
Copper	mg/kg	58	1.07	0.15	23	1.11	0.15	NA		26	1.08	0.15	25	1.1	0.15	24	1.09	0.15			
Iron	mg/kg	25000	5.36	0.62	25000	5.53	0.64	NA		25000	5.42	0.63	22000	5.52	0.64	230000	5.43	0.63			
Lead	mg/kg	17	.32	0.09	12	.33	0.09	NA		12	.33	0.09	19	.33	0.09	15	.33	0.09			
Magnesium	mg/kg	10000	107	5.93	9000	111	6.12	NA		10000	108	5.99	11000	110	6.11	11000	109	6.00			
Manganese	mg/kg	470	2.14	0.13	450	2.21	0.13	NA		490	2.17	0.13	430	2.21	0.13	430	2.17	0.13			
Molybdenum	mg/kg	2.4	2.14	0.65	2.2 U	2.21	0.67	NA		2.5	2.17	0.66	2.2 U	2.21	0.67	2.6	2.17	0.66			
Nickel	mg/kg	18	2.14	0.66	17	2.21	0.69	NA		18	2.17	0.67	17	2.21	0.69	17	2.17	0.67			
Potassium	mg/kg	4300	107	56.0	3900	111	57.8	NA		3800	108	56.6	3000	110	57.7	3400	109	56.7			
Selenium	mg/kg	0.54	.54	0.26	0.55 U	.55	0.27	NA		0.54 U	.54	0.26	0.55 U	.55	0.27	0.54 U	.54	0.26			
Silver	mg/kg	1.1 U	1.07	0.88	1.1 U	1.11	0.91	NA		1.1 U	1.08	0.89	1.1 U	1.1	0.91	1.1 U	1.09	0.89			
Sodium	mg/kg	260	107	0	320	111	0	NA		640	108	0	610	110	0	640	109	0			
Thallium	mg/kg	2.5	1.07	0.37	2.7	1.11	0.38	NA		1.1 U	1.08	0.37	1.1 U	1.1	0.38	NA	1.09	0.37			
Tin	mg/kg	NA			NA			NA		NA			NA		NA			NA			
Vanadium	mg/kg	45	1.07	0.42	45	1.11	0.43	NA		49	1.08	0.42	44	1.1	0.43	47	1.09	0.42			
Zinc	mg/kg	100	2.14	0.18	84	2.21	0.19	NA		96	2.17	0.18	130	2.21	0.19	81	2.17	0.18			
Mercury	mg/kg	0.11 U	.107	.03	0.11 U	.111	.031	NA		0.11 U	.108	.0303	0.11 U	.11	.0309	0.11 U	.109	.0304			
<i>EPA 8081</i>																					
4,4'-DDD	ug/kg	16 U	6	3.3 U	3.3	1.2	NA		3.3 U	3.3	1.2	NA	3.3	1.2	3.3 U	3.3	1.2	1.4 J	3.3	1.2	
4,4'-DDDE	ug/kg	8.5 J	16	3	14	3.3	.74	NA		1.5 J	3.3	.72	2.4 J	3.3	.74	4.6	3.3	.6			
4,4'-DDDT	ug/kg	16 U	16	6.4	12 J	3.3	.74	NA		6.4	3.3	.73	3.1 J	3.3	.73	3.3 U	3.3	.73			
Aldrin	ug/kg	80 U	80	1.4	17 U	17	.28	NA		16 U	16	.28	17 U	17	.28	16 U	16	.28			
alpha-BHC	ug/kg	8.0 U	8	3	1.7 U	1.7	.62	NA		1.6 U	1.6	.51	1.7 U	1.7	.52	1.6 U	1.6	.51			
alpha-Chlordane	ug/kg	80 U	80	1.6	1.1 J	17	.33	NA		1.4 J	16	.32	17 U	17	.33	16 U	16	.32			
Arochlor-1016	ug/kg	180 U	23	3.7 U	37	4.7	NA		36 U	36	4.6	36 U	36	4.7	36 U	36	4.7				
Arochlor-1221	ug/kg	180 U	42	37 U	37	8.7	NA		36 U	36	8.5	36 U	36	8.5	36 U	36	8.5				

SWDIV Contract No. N68711-93-D-1459, DO 0113
OHM Project No. 20253, DCN SWXXX

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	20253-1409 ST-16A-SB-30 05/12/00				20253-1410 ST-16A-SB-30 05/12/00				20253-1419 ST-16A-SB-31 05/23/00				20253-1420 ST-16A-SB-32 05/23/00				20253-1421 ST-16A-SB-33 05/23/00				20253-1422 Surface				
					Surface				Surface				Surface				Surface				Surface				
	Unit	Result Qtr	MDL	RDL	Result Qtr	MDL	RDL	MDL	Result Qtr	MDL	RDL	MDL	Result Qtr	MDL	RDL	MDL	Result Qtr	MDL	RDL	MDL	Result Qtr	MDL	RDL	MDL	
Chlorobenzene	µg/kg	5.4 U	5.4	.34	5.5 U	5.5	.35	NA	5.4 U	5.4	.34	5.5 U	5.5	.35	5.5 U	5.4 U	5.4	2.2	5.4 U	5.4	2.2	5.4 U	5.4	2.1	
Chloroethane	µg/kg	5.4 U	5.4	.21	5.5 U	5.5	.22	NA	5.4 U	5.4	.21	5.5 U	5.5	.22	5.5 U	5.4 U	5.4	.47	5.4 U	5.4	.47	5.4 U	5.4	.47	
Chloroform	µg/kg	5.4 U	5.4	.46	5.5 U	5.5	.48	NA	5.4 U	5.4	.47	5.5 U	5.5	.48	5.5 U	5.4 U	5.4	1	5.5 U	5.5	1	5.4 U	5.4	1	
Chloromethane	µg/kg	5.4 U	5.4	.99	5.5 U	5.5	.55	1	NA	5.4 U	5.4	1	5.5 U	5.5	.55	5.5 U	5.4 U	5.4	.55	5.5 U	5.5	.55	5.4 U	5.4	.54
cis-1,2-Dichloroethene	µg/kg	5.4 U	5.3	.53	5.5 U	5.5	.55	NA	5.4 U	5.4	.54	5.5 U	5.5	.55	5.5 U	5.4 U	5.4	.54	5.5 U	5.5	.55	5.4 U	5.4	.54	
cis-1,3-Dichloropropene	µg/kg	5.4 U	5.4	.6	5.5 U	5.5	.62	NA	5.4 U	5.4	.61	5.5 U	5.5	.62	5.4 U	5.4 U	5.4	.61	5.5 U	5.5	.62	5.4 U	5.4	.61	
Dibromochloromethane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dichlorodifluoromethane	µg/kg	5.4 U	5.4	.31	5.5 U	5.5	.32	NA	5.4 U	5.4	.31	5.5 U	5.5	.32	5.4 U	5.4 U	5.4	.31	5.5 U	5.5	.32	5.4 U	5.4	.31	
Ethylbenzene	µg/kg	11 U	11	.65	11 U	11	.67	NA	11 U	11	.66	11 U	11	.67	11 U	11 U	11	.67	11 U	11	.67	11 U	11	.66	
Methyl tert-butyl ether (MTBE)	µg/kg	3.1 J	5.4	.96	4.9 J	5.5	.99	NA	5.4 U	5.4	.97	12 J	5.5	.99	5.4 U	5.4 U	5.4	.97	12 J	5.5	.99	5.4 U	5.4	.98	
Styrene	µg/kg	5.4 U	5.4	.29	5.5 U	5.5	.3	NA	5.4 U	5.4	.29	5.5 U	5.5	.3	5.5 U	5.4 U	5.4	.29	5.5 U	5.5	.3	5.4 U	5.4	.3	
Tetrachloroethene	µg/kg	5.4 U	5.4	.47	5.5 U	5.5	.49	NA	5.4 U	5.4	.48	5.5 U	5.5	.49	5.5 U	5.4 U	5.4	.48	5.5 U	5.5	.49	5.4 U	5.4	.48	
Toluene	µg/kg	5.4 U	5.4	.37	5.5 U	5.5	.38	NA	5.4 U	5.4	.37	5.5 U	5.5	.38	5.5 U	5.4 U	5.4	.37	5.5 U	5.5	.38	5.4 U	5.4	.37	
trans-1,2-Dichloroethene	µg/kg	5.4 U	5.4	1.2	5.5 U	5.5	1.2	NA	5.4 U	5.4	1.2	5.5 U	5.5	1.2	5.5 U	5.4 U	5.4	1.2	5.5 U	5.5	1.2	5.4 U	5.4	1.2	
trans-1,3-Dichloropropene	µg/kg	5.4 U	5.4	.77	5.5 U	5.5	.79	NA	5.4 U	5.4	.78	5.5 U	5.5	.79	5.5 U	5.4 U	5.4	.78	5.5 U	5.5	.79	5.4 U	5.4	.78	
Trichloroethene	µg/kg	5.4 U	5.4	.55	5.5 U	5.5	.57	NA	5.4 U	5.4	.56	5.5 U	5.5	.57	5.5 U	5.4 U	5.4	.56	5.5 U	5.5	.57	5.4 U	5.4	.56	
Trichlorofluoromethane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Vinyl acetate	µg/kg	5.4 U	5.4	.29	5.5 U	5.5	.3	NA	5.4 U	5.4	.29	5.5 U	5.5	.3	5.5 U	5.4 U	5.4	.29	5.5 U	5.5	.3	5.4 U	5.4	.29	
Vinyl chloride	µg/kg	5.4 U	5.4	.82	5.5 U	5.5	.85	NA	5.4 U	5.4	.83	5.5 U	5.5	.85	5.5 U	5.4 U	5.4	.83	5.5 U	5.5	.85	5.4 U	5.4	.83	
Xylenes (total) <i>EP4 8270</i>	µg/kg	5.4 U	5.4	1.5	5.5 U	5.5	1.5	NA	5.4 U	5.4	1.5	5.5 U	5.5	1.5	5.5 U	5.4 U	5.4	1.5	5.5 U	5.5	1.5	5.4 U	5.4	1.5	
1,2,4-Trichlorobenzene	µg/kg	710 U	710	.290	370 U	370	.150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	µg/kg	710 U	710	.280	370 U	370	.140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	µg/kg	710 U	710	.270	370 U	370	.140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	µg/kg	710 U	710	.250	370 U	370	.130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,5-Trichloropropene	µg/kg	1800 U	1800	.170	920 U	920	.90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4,6-Trichlorophenol	µg/kg	710 U	710	.250	370 U	370	.130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4-Dichlorophenol	µg/kg	710 U	710	.330	370 U	370	.170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4-Dimethylphenol	µg/kg	1800 U	1800	.350	920 U	920	.180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4-Dinitrophenol	µg/kg	710 U	710	.130	370 U	370	.66	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2,4-Dinitrotoluene	µg/kg	710 U	710	.160	370 U	370	.82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Chloronaphthalene	µg/kg	710 U	710	.290	370 U	370	.150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2-Chlorophenol	µg/kg	1800 U	1800																						

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	20253-1409				20253-1410				20253-1419				20253-1420				ST-16A-SB-32				ST-16A-SB-33				
				ST-16A-SB-30	05/12/00	Surface		Result Qlf	RDL	MDL		ST-16A-SB-31	05/23/00	Surface		ST-16A-SB-32	05/23/00	Surface		ST-16A-SB-32	05/23/00	Surface		ST-16A-SB-33	05/23/00	Surface		
3,3'-Dichlorobenzidine			μg/kg	710 U	710	160		370 U	370	81		NA		NA		NA												
3-Methyl-4-chlorophenol			μg/kg	710 U	710	240		370 U	370	120		NA		NA		NA												
3-Nitroaniline			μg/kg	1800 U	1800	190		920 U	920	96		NA		NA		NA												
4-Bromophenyl phenyl ether			μg/kg	710 U	710	170		370 U	370	86		NA		NA		NA												
4-Chloroaniline			μg/kg	710 U	710	260		370 U	370	130		NA		NA		NA												
4-Chlorophenyl phenyl ether			μg/kg	710 U	710	180		370 U	370	91		NA		NA		NA												
4-Methylphenol			μg/kg	1800 U	1800	150		920 U	920	77		NA		NA		NA												
4-Nitroaniline			μg/kg	1800 U	1800	330		920 U	920	170		NA		NA		NA												
4-Nitrophenol			μg/kg	710 U	710	220		370 U	370	110		NA		NA		NA												
Acenaphthene			μg/kg	710 U	710	220		370 U	370	53		NA		NA		NA												
Aniline			μg/kg	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
Anthracene			μg/kg	710 U	710	140		370 U	370	74		NA		NA		NA												
Benzidine			μg/kg	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
Benzofluoranthene			μg/kg	710 U	210	26		370 U	370	76		NA		NA		NA												
Benzofluoranthene			μg/kg	230 J	210	45		41 U	41	11		NA		NA		NA												
Benzofluoranthene			μg/kg	510 J	710	140		370 U	370	.71		NA		NA		NA												
Benzofluoranthene			μg/kg	200 J	430	75		370 U	370	22		NA		NA		NA												
Benzofluoranthene			μg/kg	710 UJ	210	28		370 U	370	.75		NA		NA		NA												
Benzonic acid			μg/kg	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
Benzyl alcohol			μg/kg	710 U	710	320		370 U	370	160		NA		NA		NA												
Bis(2-chloroethoxy)methane			μg/kg	710 U	710	290		370 U	370	150		NA		NA		NA												
Bis(2-chloroethyl)ether			μg/kg	710 U	710	320		370 U	370	160		NA		NA		NA												
Bis(2-chlorosopropyl)ether			μg/kg	710 U	710	180		370 U	370	.94		NA		NA		NA												
Bis(2-ethylhexyl)phthalate			μg/kg	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
Bisphenol A			μg/kg	710 U	710	160		370 U	370	84		NA		NA		NA												
Butyl benzyl phthalate			μg/kg	NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA		NA
Carbazole			μg/kg	230 J	210	32		370 U	370	100		NA		NA		NA												
Chrysene			μg/kg	280 J	710	170		280 J	370	88		NA		NA		NA												
Di- <i>n</i> -butyl phthalate			μg/kg	710 UJ	710	110		370 U	370	.55		NA		NA		NA												
Di- <i>t</i> -octyl phthalate			μg/kg	69 UJ	69	69		35 U	35	35		NA		NA		NA												
Dibenz[a,h]anthracene			μg/kg	710 U	710	220		370 U	370	120		NA		NA		NA												
Dibenzofuran			μg/kg	710 U	710	120		370 U	370	60		NA		NA		NA												
Dieethyl phthalate			μg/kg	710 U	710	130		370 U	370	.66		NA		NA		NA												
Dimethyl phthalate			μg/kg	200 J	710	170		370 U	370	.85		NA		NA		NA												
Fluoranthene			μg/kg	710 U	430	180		370 U	370	.82		NA		NA		NA												
Fluorene			μg/kg	710 U	710	200		370 U	370	100		NA		NA		NA												
Hexachlorobutadiene			μg/kg	710 U	710	300		370 U	370	.150		NA		NA		NA												
Hexachlorocyclopentadiene			μg/kg	710 U	710	380	</																					

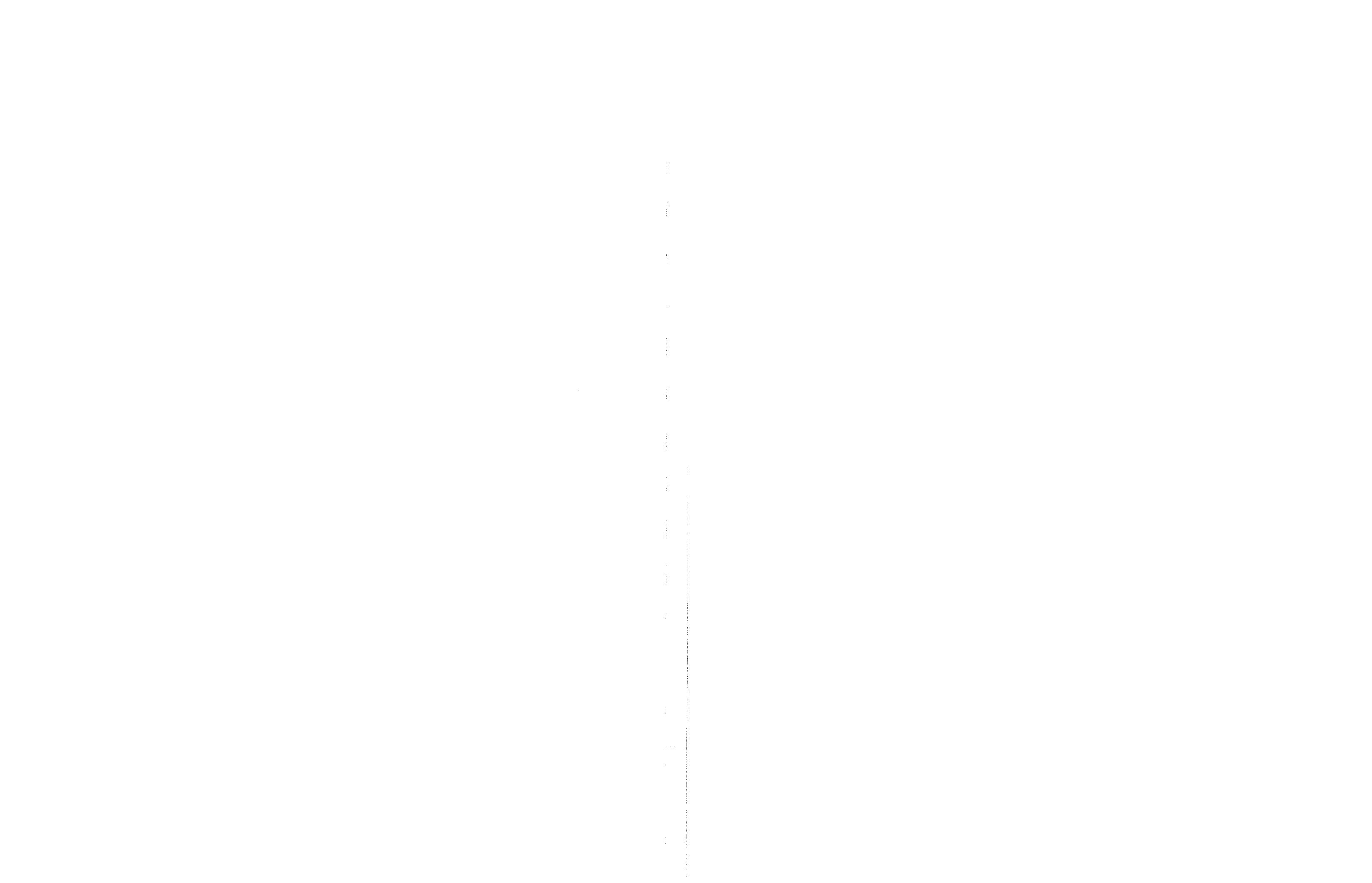


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	20253-1409 05/12/00				20253-1410 05/12/00				20253-1419 05/23/00				ST-16A-SB-31 05/23/00 Surface				ST-16A-SB-32 05/23/00				ST-16A-SB-33 05/23/00 Surface				20253-1421 05/23/00										
	Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL							
Hexachloroethane	µg/kg	710 U	710	270	370 U	370	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Hydroquinone	µg/kg	NA	180 J	210	15	370 U	11	.77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Indeno[1,2,3-cd]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Isophorone	µg/kg	710 U	710	300	370 U	370	160	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
N-Nitrosodi-n-propylamine	µg/kg	710 U	710	150	370 U	370	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
N-Nitrosodiphenylamine	µg/kg	710 U	710	290	370 U	370	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Naphthalene	µg/kg	710 U	710	290	370 U	370	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Nitrobenzene	µg/kg	710 U	710	170	370 U	370	88	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Pentachlorobenzoil	µg/kg	710 U	710	430	43	370 U	22	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Phenanthrene	µg/kg	710 U	710	340	370 U	370	180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Phenol	µg/kg	240 J	430	30	370 U	370	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
Pyridine	<i>EPA 8310</i>				2100 U	710	220	110 U	110	49	530	240	1100 U	1100	480	1100 U	1100	490	110 U	110	490	2200 U	530	2200 U	2200 U	530	2200 U	2200 U	520	2200 U					
Acenaphthene	µg/kg	4300 U	710	220	220 U	220	53	1100 U	1100	250	2200 U	2200	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U	2200 U					
Acenaphthylene	µg/kg	210 U	710	140	11 U	370	74	53 U	53	16	110 U	110	34	110 U	110	34	110 U	110	34	11 U	11	34	11 U	11	34	11 U	11	34	11 U	11	34				
Anthracene	µg/kg	99 J	210	26	11 U	370	76	150	53	6.4	100 J	110	13	73 J	110	13	73 J	110	13	19	13	19	13	19	13	19	13	19	13	19	13	19			
Benz[a]anthracene	µg/kg	170 J	210	45	0.93 J	11	.55	300 J	53	11	240	110	23	200	110	23	200	110	23	23	23	23	23	23	23	23	23	23	23	23	23	23			
Benz[a]pyrene	µg/kg	270 J	710	140	6.4 J	370	71	300 J	110	11	350	220	22	240	220	22	240	220	22	22	22	22	22	22	22	22	22	22	22	22	22	22			
Benz[b]fluoranthene	µg/kg	310 J	430	75	9.3 J	22	3.9	170	110	19	370	220	22	38	220	22	38	220	22	21	21	21	21	21	21	21	21	21	21	21	21	21			
Benz[g]phenylene	µg/kg	130 J	210	28	11 U	370	75	190 J	53	6.9	150	110	9.8	110 J	110	9.8	110 J	110	9.8	8.7 J	11	9.8	8.7 J	11	9.8	8.7 J	11	9.8	8.7 J	11	9.8	8.7 J	11	9.8	8.7 J
Benz[k]fluoranthene	µg/kg	210 J	210	32	6.3 J	370	100	210	53	8	150	110	16	120	110	16	120	110	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	
Chrysene	µg/kg	430 U	69	69	22 U	35	35	34 J	110	33	220 U	220	67	220 U	220	67	220 U	220	67	69	69	69	69	69	69	69	69	69	69	69	69	69	69		
Dibenz[a,h]anthracene	µg/kg	430 U	710	170	22 U	370	85	250	110	22	210 J	220	46	160 J	220	46	160 J	220	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46		
Fluoranthene	µg/kg	430 U	430	180	22 U	370	82	110 U	110	46	220 U	220	93	220 U	220	93	220 U	220	93	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	
Fluorene	µg/kg	360	210	15	11 U	11	.77	420	53	16	770	110	33	590	110	33	590	110	33	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	
Indeno[1,2,3-cd]pyrene	µg/kg	2100 U	710	290	110 U	370	150	530 U	530	150	1100 U	1100	310	1100 U	1100	310	1100 U	1100	310	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320	
Naphthalene	µg/kg	430 U	430	43	22 U	370	22	180	11																										

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1423 05/23/00	2.0	ST-16A-SB-33 05/23/00	20253-1424 05/23/00	ST-16A-SB-34 05/23/00	20253-1425 05/23/00	ST-16A-SB-35 05/23/00	20253-1426 05/23/00	ST-16A-SB-35 05/23/00	2.0	Surface	20253-1427 05/23/00	ST-16A-SB-35 05/23/00	2.0	Surface	20253-1428 05/23/00	ST-16A-SB-36 05/23/00	2.0	Surface
Location Code																			
Date Sampled																			
Depth (feet below ground surface)																			
	Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
<i>CA LUFT 8015M</i>	mg/kg	NA			11 U	10.5	.872	NA			70	10.5	.879	NA			11 U	10.7	.891
TPH as Diesel	mg/kg	NA			1.1 U	1.05	.0209	NA			1.1 U	1.05	.0211	NA			1.1 U	1.07	.0214
TPH as Gasoline	mg/kg	NA			NA			NA			NA			NA			NA		
Unknown Hydrocarbons	mg/kg																		
<i>EPA 6010</i>	mg/kg	NA			17000 J	52.3	1.06	NA			19000	52.7	1.06	NA			19000	53.4	1.08
Aluminum	mg/kg	NA			11 UJ	10.5	5.60	NA			11 U	10.5	5.64	NA			11 U	10.7	5.72
Antimony	mg/kg	NA			6.1 J	.52	.29	NA			7.5	.53	.29	NA			7.8	.53	.30
Arsenic	mg/kg	NA			120	1.05	.04	NA			150	1.05	.04	NA			150	1.07	.04
Barium	mg/kg	NA			0.63	2.1	0.01	NA			0.69	2.1	0.01	NA			0.70	2.1	0.01
Beryllium	mg/kg	NA			1.1 U	1.05	0.10	NA			1.1 U	1.05	0.11	NA			1.1 U	1.07	0.11
Cadmium	mg/kg	NA			12000 J	105	2.35	NA			11000	105	2.37	NA			11000	107	2.40
Calcium	mg/kg	NA			23 J	1.05	.58	NA			22	1.05	.58	NA			21	1.07	.59
Chromium	mg/kg	NA			7.0	2.09	.88	NA			8.0	2.11	.89	NA			8.4	2.14	.90
Cobalt	mg/kg	NA			24	1.05	.15	NA			26	1.05	.15	NA			27	1.07	.15
Copper	mg/kg	NA			25000 J	52.3	0.61	NA			25000	52.7	0.61	NA			26000	53.4	0.62
Iron	mg/kg	NA			21 J	.31	.09	NA			17	.32	.09	NA			15	.32	.09
Lead	mg/kg	NA			8600	105	5.78	NA			9500	105	5.83	NA			9900	107	5.91
Magnesium	mg/kg	NA			370 J	2.09	0.13	NA			430	2.11	0.13	NA			450	2.14	0.13
Manganese	mg/kg	NA			2.1 U	2.09	0.64	NA			2.2	2.11	0.64	NA			2.1 U	2.14	0.65
Molybdenum	mg/kg	NA			16 J	2.09	0.65	NA			18	2.11	0.65	NA			17	2.14	0.66
Nickel	mg/kg	NA			3400 J	105	54.6	NA			4100	105	55.0	NA			4300	107	55.8
Potassium	mg/kg	NA			0.52 U	.52	.25	NA			0.53 U	.53	.25	NA			0.53 U	.53	.26
Selenium	mg/kg	NA			1.1 U	1.05	.86	NA			1.1 U	1.05	.86	NA			1.1 U	1.07	.88
Silver	mg/kg	NA			340	1.05	0	NA			360	1.05	0	NA			310	107	0
Sodium	mg/kg	NA			1.3	1.05	.36	NA			1.1 U	1.05	.36	NA			1.1 U	1.07	.37
Thallium	mg/kg	NA			NA			NA			NA			NA			NA		
Tin	mg/kg	NA			42 J	1.05	.41	NA			48	1.05	.41	NA			47	1.07	.42
Vanadium	mg/kg	NA			98 J	2.09	.18	NA			92	2.11	.18	NA			100	2.14	.18
Zinc	mg/kg																		
<i>EPA 7471A</i>	mg/kg	NA			0.11 U	.105	.0293	NA			0.11 U	.105	.0295	NA			0.11 U	.107	.0299
Mercury	mg/kg	NA			3.1 U	3.1	1.3	NA			3.8	3.2	1.2	NA			4.3	3.2	1.2
<i>EPA 8081</i>	mg/kg	NA			3.3	.7	NA			15	3.2	.58	NA			21	3.2	.59	
4,4'-DDD	mg/kg	NA			2.1 J	3.1	1.3	NA			2.2 J	3.2	1.3	NA			3.2	1.3	1.3
4,4'-DDE	mg/kg	NA			16 U	.16	.27	NA			16 U	.16	.27	NA			16 U	.16	.27
4,4'-DDT	mg/kg	NA			1.6 U	1.6	.49	NA			1.6 U	1.6	.59	NA			1.6 U	1.6	.5
Aldrin	mg/kg	NA			3.3 J	16	.31	NA			1.6 J	16	.32	NA			3.1 J	16	.36
alpha-BHC	mg/kg	NA			35 U	35	4.5	NA			35 U	35	4.5	NA			35 U	35	4.6
alpha-Chlordane	mg/kg	NA			35 U	35	8.2	NA			35 U	35	8.3	NA			35 U	35	8.4
Aroclor-1016	mg/kg	NA																	
Aroclor-1221	mg/kg	NA																	

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1423	20253-1424	20253-1425	20253-1426	20253-1427	20253-1428
Location Code	ST-16A-SB-33	ST-16A-SB-34	ST-16A-SB-35	ST-16A-SB-35	ST-16A-SB-35	ST-16A-SB-36
Date Sampled	05/23/00	05/23/00	05/23/00	05/23/00	05/23/00	05/23/00
Depth (feet below ground surface)	2.0	2.0	2.0	2.0	2.0	Surface
Unit	Result Qtr	RDL	MDL	Result Qtr	RDL	MDL
Aroclor-1222	NA	35 U	4.5	NA	35 U	4.5
Aroclor-1242	µg/kg	NA	35 U	3	NA	3
Aroclor-1248	µg/kg	NA	35 U	3	NA	3
Aroclor-1254	µg/kg	NA	35 U	3.2	NA	3.2
Aroclor-1260	µg/kg	NA	35 U	2.9	NA	2.9
Beta-BHC	µg/kg	NA	16 U	.57	NA	.57
Delta-BHC	µg/kg	NA	16 U	.32	NA	.39
Dieldrin	µg/kg	NA	3.1 U	1.5	NA	1.5
Endosulfan I	µg/kg	NA	1.6 U	1.6	NA	1.6
Endosulfan II	µg/kg	NA	3.1 U	.85	NA	.85
Endosulfan sulfate	µg/kg	NA	3.1 U	.82	NA	.83
Endrin	µg/kg	NA	3.1 U	1.2	NA	1.2
Endrin aldehyde	µg/kg	NA	2.0 J	3.1	NA	3.2
gamma-BHC	µg/kg	NA	16 U	.65	NA	.65
gamma-Chlordane	µg/kg	NA	3.2 J	16	NA	16
Hepachlor	µg/kg	NA	0.58	.34	NA	.34
Hepachlor epoxide	µg/kg	NA	2.1 U	2.1	NA	2.1
Methoxychlor	µg/kg	NA	32	16	NA	16
Toxaphene	EPA 8260A	NA	5.2 U	.56	NA	.56
1,1,1-Trichloroethane	µg/kg	NA	5.2 U	.45	NA	.45
1,1,2,2-Tetrachloroethane	µg/kg	NA	5.2 U	.6	NA	.6
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/kg	NA	NA	NA	NA	NA
1,1,2-Trichloroethane	µg/kg	NA	5.2 U	.47	NA	.48
1,1-Dichloroethane	µg/kg	NA	5.2 U	.37	NA	.37
1,1-Dichloroethene	µg/kg	NA	5.2 U	.52	NA	.53
1,2,3-Trichloropropane	µg/kg	NA	5.2 U	.52	.57	NA
1,2-Dichlorostilbene	µg/kg	NA	5.2 U	.52	.65	NA
1,2-Dichloropropane	µg/kg	NA	5.2 U	.52	.35	NA
2-Butanone (MEK)	µg/kg	NA	52 U	.34	NA	.35
2-Chloroethyl vinyl ether	µg/kg	NA	5.2 U	.52	.34	NA
2-Hexanone	µg/kg	NA	52 U	.52	.34	NA
4-Methyl-2-pentanone (MIBK)	µg/kg	NA	52 U	.52	.3	NA
Acetone	µg/kg	NA	52 U	.52	.5	NA
Benzene	µg/kg	NA	5.2 U	.22	NA	.22
Bromodichloromethane	µg/kg	NA	5.2 U	.52	.56	NA
Bromoform	µg/kg	NA	5.2 U	.52	.99	NA
Bromomethane	µg/kg	NA	5.2 U	.52	1.1	NA
Carbon disulfide	µg/kg	NA	NA	NA	NA	NA
Carbon tetrachloride	µg/kg	NA	5.2 U	.52	.54	NA

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	20253-1423			20253-1424			ST-16A-SB-33			ST-16A-SB-34			20253-1425			ST-16A-SB-35			20253-1426			ST-16A-SB-35			20253-1427			ST-16A-SB-36			
		Date Sampled	Depth (feet below ground surface)	2.0	05/23/00	05/23/00	Surface	2.0	05/23/00	Surface	2.0	05/23/00	Surface	2.0	05/23/00	Surface	2.0	05/23/00	Surface	2.0	05/23/00	Surface	2.0	05/23/00	Surface	2.0	05/23/00	Surface	2.0	05/23/00	Surface	
Chlorobenzene				Unit	Result QIfr	RDL	MDL	Result QIfr	RDL	MDL	Result QIfr	RDL	MDL	Result QIfr	RDL	MDL	Result QIfr	RDL	MDL	Result QIfr	RDL	MDL	Result QIfr	RDL	MDL	Result QIfr	RDL	MDL	Result QIfr	RDL	MDL	
Chloroethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethylene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromodifluoromethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl acetate				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (Total) <i>EPA 8270</i>				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichlorophenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichlorophenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichlorophenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene																																

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1423	20253-1424	ST-16A-SB-33	ST-16A-SB-34	20253-1425	ST-16A-SB-35	20253-1426	ST-16A-SB-35	20253-1427	ST-16A-SB-36	20253-1428
Location Code	05/23/00	05/23/00	Surface	05/23/00	05/23/00	05/23/00	05/23/00	05/23/00	05/23/00	05/23/00	05/23/00
Date Sampled											
Depth (feet below ground surface)	2.0	2.0	Unit	Result Qtr.	RDL	MDL	Result Qtr.	RDL	MDL	Result Qtr.	RDL
3,3'-Dichlorobenzidine	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-4-chlorophenol	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromonaphthal phenyl ether	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Aceanaphthalene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Aceanaphthalene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Aniline	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzidine	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzof[a]anthracene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzof[α]anthracene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzof[b]fluoranthene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzof[g]perylene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzof[k]fluoranthene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzonic acid	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethyl)ether	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroisopropyl)ether	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethoxyethyl)phthalate	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Bisphenol A	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Di- <i>tert</i> -octyl phthalate	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	µg/kg	NA	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA

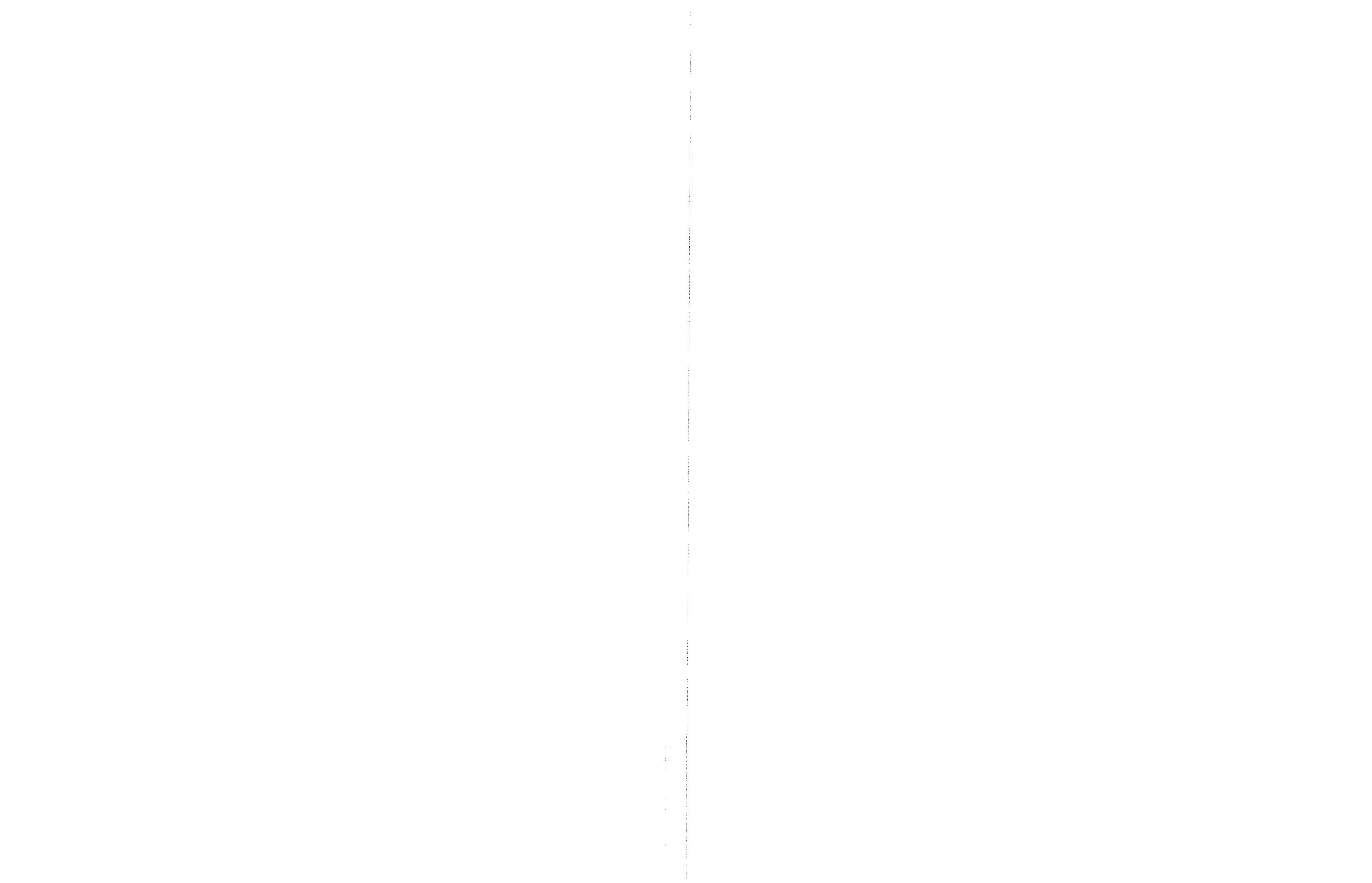


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1423	20233-1424	20253-1425	20253-1426	20253-1427	20253-1428
Location Code	ST-16A-SB-33	ST-16A-SB-34	ST-16A-SB-35	ST-16A-SB-35	ST-16A-SB-35	ST-16A-SB-36
Date Sampled	05/23/00	05/23/00	05/23/00	05/23/00	05/23/00	05/23/00
Depth (feet below ground surface)	2.0	Surface	2.0	Surface	2.0	Surface
	Unit	Result QFr	RDL	MDL	Result QFr	RDL
Hexachloroethane	µg/kg	NA	NA	NA	NA	NA
Hydroquinone	µg/kg	NA	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	µg/kg	NA	NA	NA	NA	NA
Isophorone	µg/kg	NA	NA	NA	NA	NA
N-Nitrosodi-n-propylamine	µg/kg	NA	NA	NA	NA	NA
Naphthalene	µg/kg	NA	NA	NA	NA	NA
Nitrobenzene	µg/kg	NA	NA	NA	NA	NA
Pentachlorophenol	µg/kg	NA	NA	NA	NA	NA
Phenanthrene	µg/kg	NA	NA	NA	NA	NA
Phenol	µg/kg	NA	NA	NA	NA	NA
Pyrene	µg/kg	NA	NA	NA	NA	NA
Pyridine	µg/kg	NA	NA	NA	NA	NA
<i>EPA 8310</i>						
Aceanaphthene	µg/kg	120 U	120	52	2100 U	940
Aceanaphthylene	µg/kg	230 U	230	55	4200 U	1000
Anthracene	µg/kg	12 U	12	3.6	210 U	65
Benzof[a]anthracene	µg/kg	53	12	1	320	210
Benzol[a]pyrene	µg/kg	100	12	2.4	650	210
Benzol[bifluoranthene	µg/kg	94	23	2.3	1100	420
Benzol[bghi]perylene	µg/kg	55	23	4.1	1500	420
Benzol[k]fluoranthene	µg/kg	71	12	1.5	470	210
Chrysene	µg/kg	62	12	1.7	780	210
Dibenz[a,h]anthracene	µg/kg	11 J	23	7.2	150 J	130
Fluoranthene	µg/kg	99	23	4.9	690	420
Fluorene	µg/kg	23 U	23	10	420 U	180
Indeno[1,2,3-cd]pyrene	µg/kg	130	12	3.5	1700	210
Naphthalene	µg/kg	120 U	120	34	2100 U	600
Phenanthrene	µg/kg	24	23	2.3	230 J	420
Pyrene	µg/kg	120	23	1.6	660	420
Cyanide	mg/kg	NA	NA	0.52	U	523

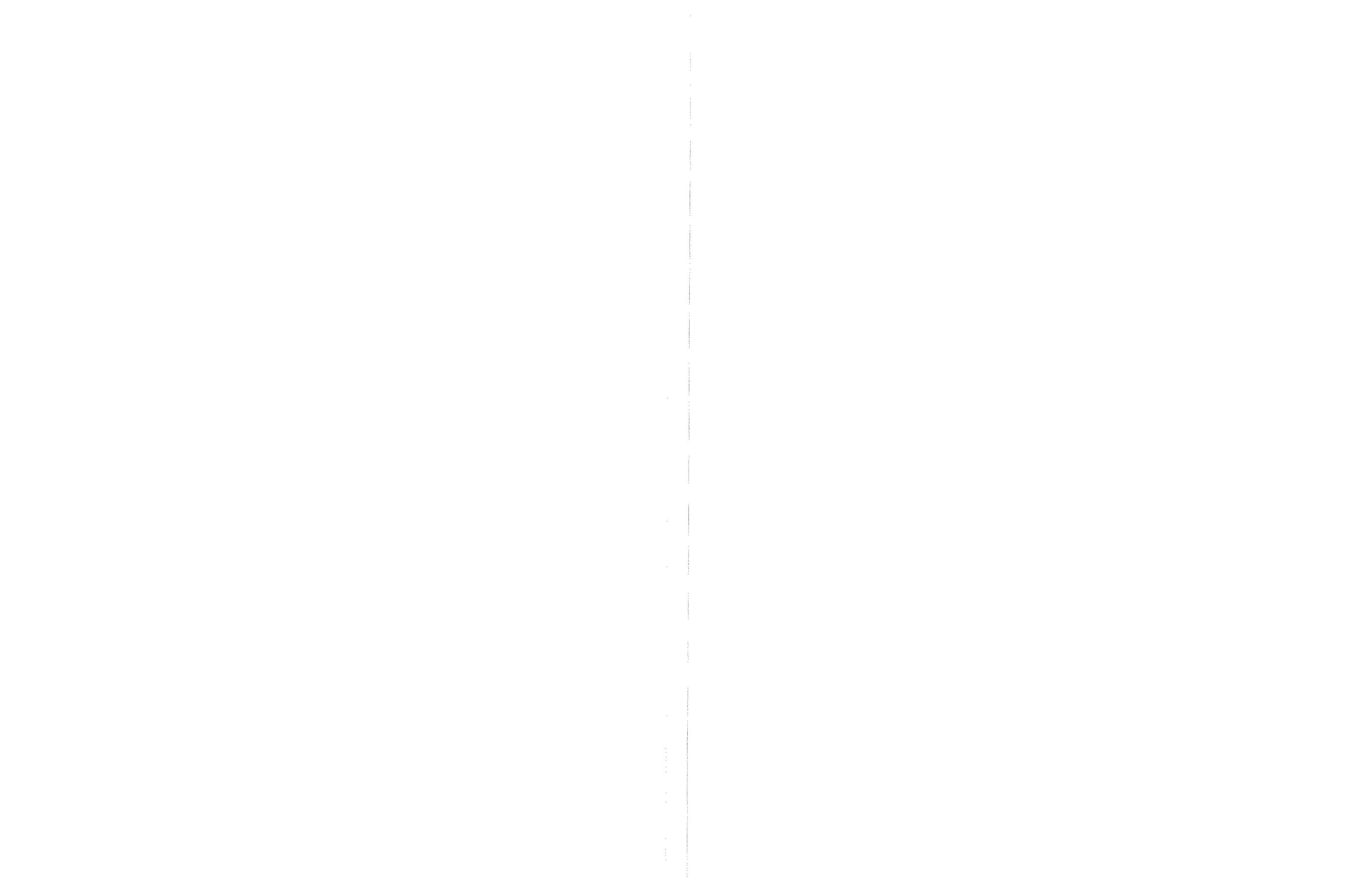


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	Unit	20253-1429 (Dup)			20253-1430			20253-1431		
					ST-16A-SB-36 05/23/00	Surface	2.0	ST-16A-SB-36 05/23/00	RDL	MDL	Result QFr	RDL	MDL
CA LIUFT 8015M													
TPH as Diesel	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	18	10.5
TPH as Gasoline	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	1.1 U	1.05
Unknown Hydrocarbons	mg/kg	NA										NA	.0211
EPA 6010													
Aluminum	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	16000	52.7
Antimony	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	11 U	10.5
Arsenic	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	6.8	.53
Barium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	130	1.05
Beryllium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	0.58	0.04
Cadmium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	1.1 U	2.1
Calcium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	21000	105
Chromium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	18	1.05
Cobalt	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	6.7	2.11
Copper	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	22	0.89
Iron	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	21000	5.27
Lead	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	14	.32
Magnesium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	9200	105
Manganese	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	400	2.11
Molybdenum	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	2.1 U	0.13
Nickel	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	15	2.11
Potassium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	3400	55.1
Selenium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	0.53 U	.53
Silver	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	1.1 U	1.95
Sodium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	550	1.05
Thallium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	1.2	1.05
Tin	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	40	1.05
Vanadium	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	87	2.11
Zinc	mg/kg	NA										NA	0.18
EPA 7471A													
Mercury	mg/kg	NA		mg/kg	NA	NA	NA	NA	NA	NA	NA	0.11 U	.05
EPA 8081													
4,4'-DDD	µg/kg	NA		µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	0.295
4,4'-DDDE	µg/kg	NA		µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
4,4'-DDT	µg/kg	NA		µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aldrin	µg/kg	NA		µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-BHC	µg/kg	NA		µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
alpha-Chlordane	µg/kg	NA		µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1016	µg/kg	NA		µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor-1221	µg/kg	NA											

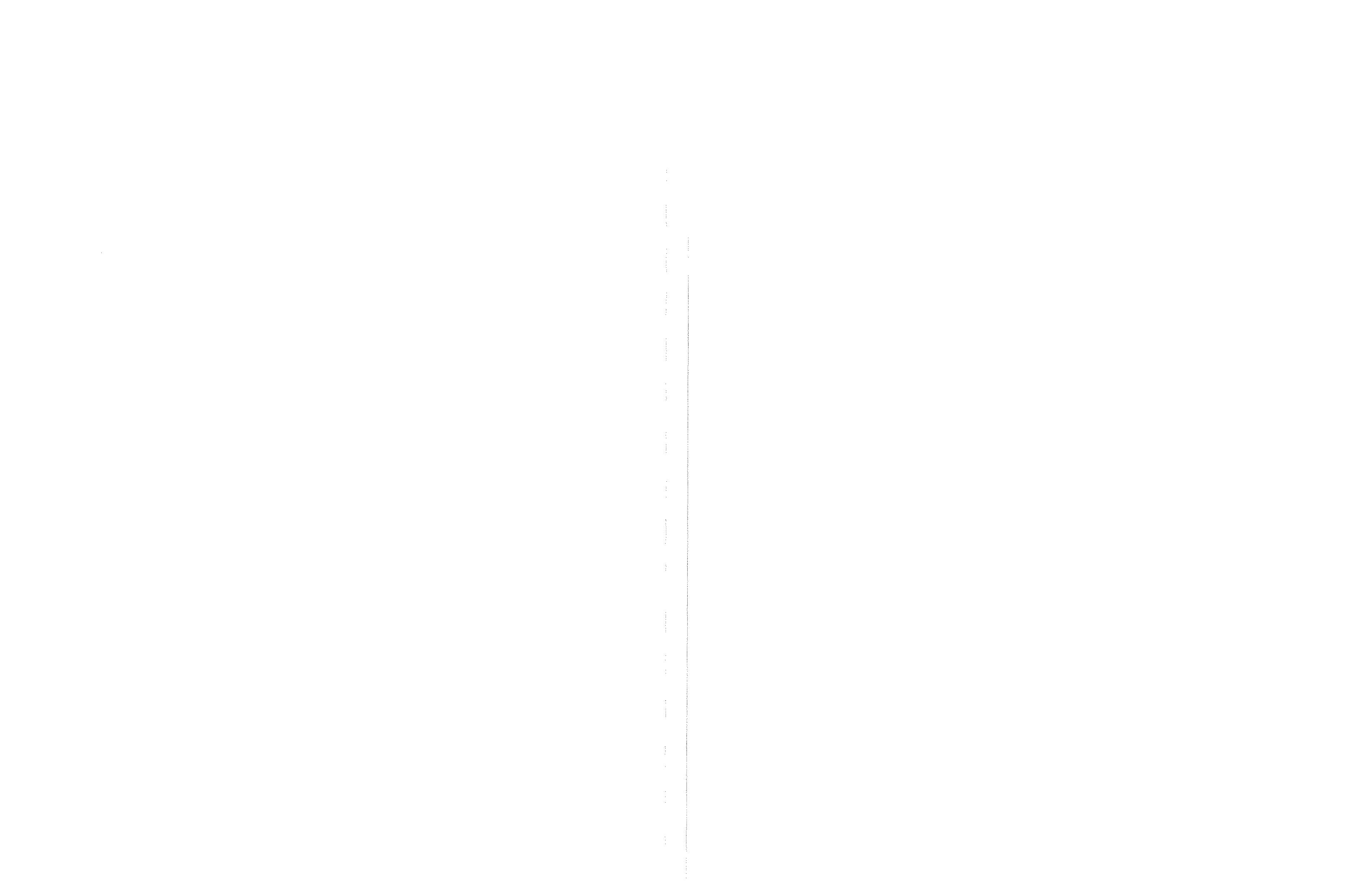


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1429 (Dup) ST-16A-SB-36 05/23/00	20253-1430 ST-16A-SB-36 05/23/00	20253-1431 ST-16A-SF-37 05/24/00	20253-1432 ST-16A-SI-38 05/24/00							
Location Code	Depth (feet below ground surface)	Unit	Result Qlfr	RDL	MDL	Result Qlfr	RDL	MDL	Result Qlfr	RDL	MDL
Aroclor-1232		µg/kg	NA			NA			NA		
Aroclor-1242		µg/kg	NA			NA			NA		
Aroclor-1248		µg/kg	NA			NA			NA		
Aroclor-1254		µg/kg	NA			NA			NA		
Aroclor-1260		µg/kg	NA			NA			NA		
Beta-BHC		µg/kg	NA			NA			NA		
Delta-BHC		µg/kg	NA			NA			NA		
Dieldrin		µg/kg	NA			NA			NA		
Endosulfan I		µg/kg	NA			NA			NA		
Endosulfan II		µg/kg	NA			NA			NA		
Endosulfan sulfate		µg/kg	NA			NA			NA		
Endrin		µg/kg	NA			NA			NA		
Endrin aldehyde		µg/kg	NA			NA			NA		
gamma-BHC		µg/kg	NA			NA			NA		
gamma-Chlordane		µg/kg	NA			NA			NA		
Hepachlor		µg/kg	NA			NA			NA		
Hepachlor epoxide		µg/kg	NA			NA			NA		
Methoxychlor		µg/kg	NA			NA			NA		
Toxaphene		µg/kg	NA			NA			NA		
<i>EPA 8260A</i>											
1,1,1-Trichloroethane		µg/kg	NA			NA			NA		
1,1,2,2-Tetrachloroethane		µg/kg	NA			NA			NA		
1,1,2-Trichloro-1,2,2-trifluoroethane		µg/kg	NA			NA			NA		
1,1,2-Trichloroethane		µg/kg	NA			NA			NA		
1,1-Dichloroethane		µg/kg	NA			NA			NA		
1,1-Dichloroethene		µg/kg	NA			NA			NA		
1,2,3-Trichloropropene		µg/kg	NA			NA			NA		
1,2-Dichloroethane		µg/kg	NA			NA			NA		
1,2-Dichloropropane		µg/kg	NA			NA			NA		
2-Butanone (MEK)		µg/kg	NA			NA			NA		
2-Chloroethyl vinyl ether		µg/kg	NA			NA			NA		
2-Hexanone		µg/kg	NA			NA			NA		
4-Methyl-2-pentanone (MIBK)		µg/kg	NA			NA			NA		
Acetone		µg/kg	NA			NA			NA		
Benzene		µg/kg	NA			NA			NA		
Bromodichloromethane		µg/kg	NA			NA			NA		
Bromoform		µg/kg	NA			NA			NA		
Bromomethane		µg/kg	NA			NA			NA		
Carbon disulfide		µg/kg	NA			NA			NA		
Carbon tetrachloride		µg/kg	NA			NA			NA		

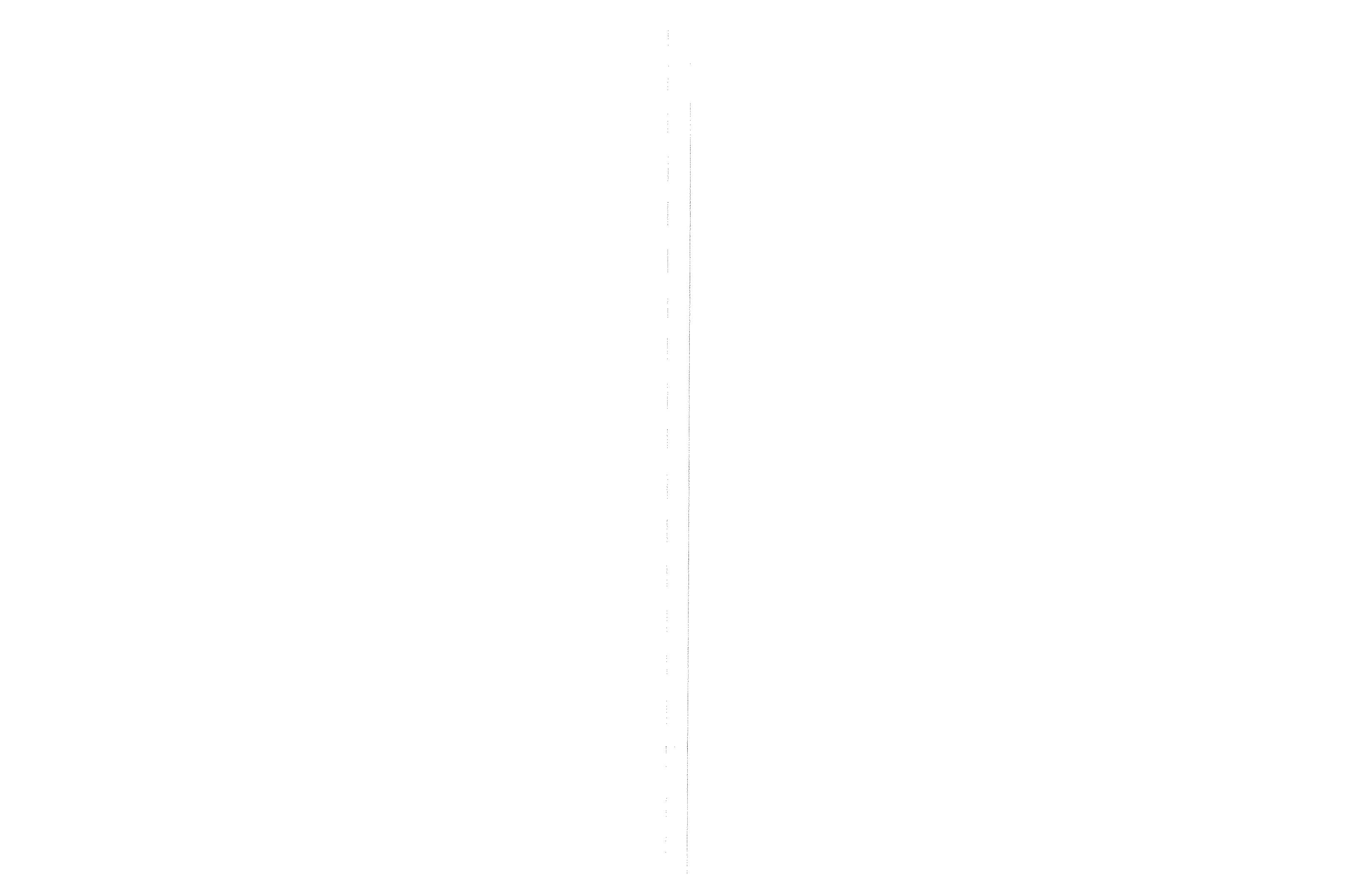


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	20253-1429 (Dup)				20253-1430				20253-1431				20253-1432			
				ST-16A-SB-36 05/23/00				ST-16A-SB-36 05/23/00				ST-16A-SB-37 05/24/00				ST-16A-SB-38 05/24/00			
				Unit	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL
Chlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloroform				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloromethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,3-Dichloropropene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibromochloromethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dichlorodifluoromethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether (MTBE)				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene chloride				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Styrene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,2-Dichloroethene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
trans-1,3-Dichloropropene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichloroethylene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trichlorofluoromethane				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl acetate				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl chloride				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Xylenes (total) <i>EPA 8270</i>				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3-Dichlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,5-Trichloropheno				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4,6-Trichloropheno				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dichloropheno				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dimethylphenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,4-Dinitrophenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2,6-Dinitrotoluene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloronaphthalene				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloropheno				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methyl-4,6-dinitrophenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylphenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitroaniline				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Nitrophenol				µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

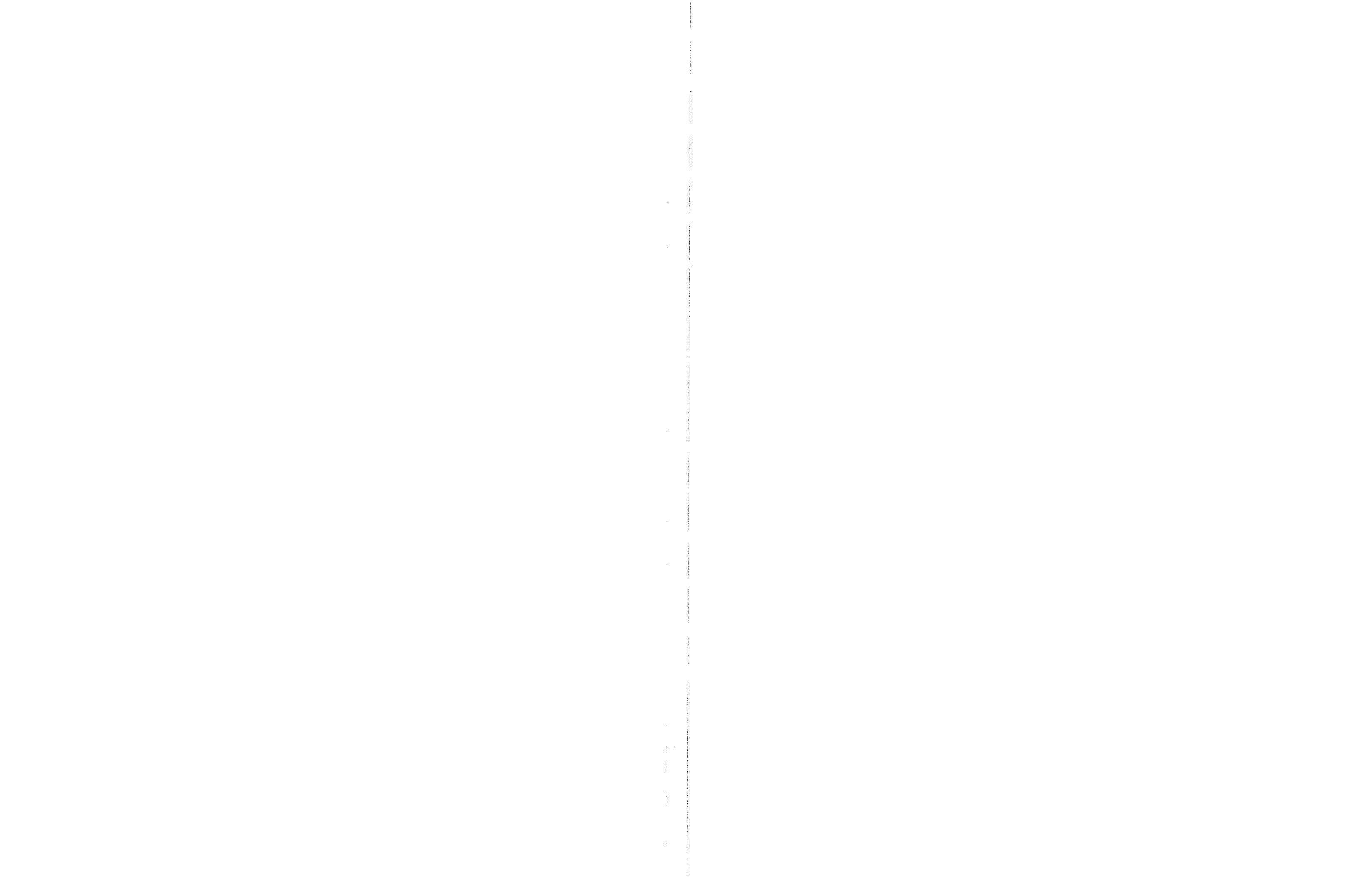


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20233-1439 (Dup)	20233-1430	20233-1431	20233-1432										
Location Code	ST-16A-SB-36	ST-16A-SB-36	ST-16A-SB-37	ST-16A-SB-38										
Date Sampled	05/23/00	05/23/00	05/24/00	05/24/00										
Depth (feet below ground surface)	Surface	2.0	Surface	Surface										
	Unit	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL	
3,3'-Dichlorobenzidine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-4-chlorophenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorobaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzidine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[ai]naphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[al]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[b]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[g]guiphenylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzol[k]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoic acid	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl alcohol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-chloroethoxy) methane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-chloroethyl) ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-chlorospropyl)ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis (2-ethylhexyl)phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bisphenol A	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Butyl benzyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a,h]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diethyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	20233-1429 (Dup)				20253-1430				20253-1431				20233-1432			
	ST-16A-SB-36 05/23/00				ST-16A-SB-36 05/23/00				ST-16A-SB-37 05/24/00				ST-16A-SB-38 05/24/00			
	Unit	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL	Result Qfr	RDL	MDL
Hexachloroethane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroquinone	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodipropylamine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyridine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>EPA 8310</i>																
Acenaphthene	µg/kg	1100 U	1100 U	110 U	110 U	110	51	1100 U	1100 U	1100 U	1100 U	1100 U	1100 U	1100 U	1100 U	1100 U
Acenaphthylene	µg/kg	2100	2100	79 U	230	55	2100 U	2100	510	2100 U	2100	510	2100 U	2100	500	500
Anthracene	µg/kg	110 U	110 U	33	11 U	11	3.5	110 U	110 U	110 U	110 U	110 U	110 U	110 U	110 U	110 U
Benzo[a]anthracene	µg/kg	92 J	110	13	5.3 J	11	1	96 J	110	13	72 J	110	13	72 J	110	13
Benzo[a]pyrene	µg/kg	190	110	22	9.2 J	11	2.4	210	110	23	150	110	23	150	110	22
Benzo[b]fluoranthene	µg/kg	240	210	21	7.1 J	23	1.3	280	210	21	230	210	21	230	210	21
Benzo[g]phenylene	µg/kg	250	210	20	7.5 J	23	1	310	210	38	250	210	38	250	210	20
Benzol[k]fluoranthene	µg/kg	120	110	9.6	11 U	11	1.5	120	110	9.7	98 J	110	9.7	98 J	110	9.5
Chrysene	µg/kg	120	110	16	3.9 J	11	1.7	130	110	16	110	110	16	110	110	16
Dibenz[a,h]anthracene	µg/kg	210 U	210	66	23 U	23	1.8	210 U	210	67	210 U	210	65	210 U	210	65
Fluoranthene	µg/kg	120 J	210	45	23 U	23	3	260	210	28	100 J	210	44	100 J	210	44
Fluorene	µg/kg	210 U	210	91	23 U	23	9.8	210 U	210	92	210 U	210	91	210 U	210	91
Indeno[1,2,3-cd]pyrene	µg/kg	460	110	32	11 U	11	8	350	110	7.5	290	110	7.4	290	110	7.4
Naphthalene	µg/kg	1100 U	1100	310	110 U	110	33	1100 U	1100	310	1100 U	1100	300	1100 U	1100	300
Phenanthrene	µg/kg	69 J	210	48	23 U	23	5.1	42 J	210	21	41 J	210	21	41 J	210	21
Pyrene	µg/kg	220	210	15	23 U	23	2.9	130 J	210	27	160 J	210	15	160 J	210	15
Cyanide	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

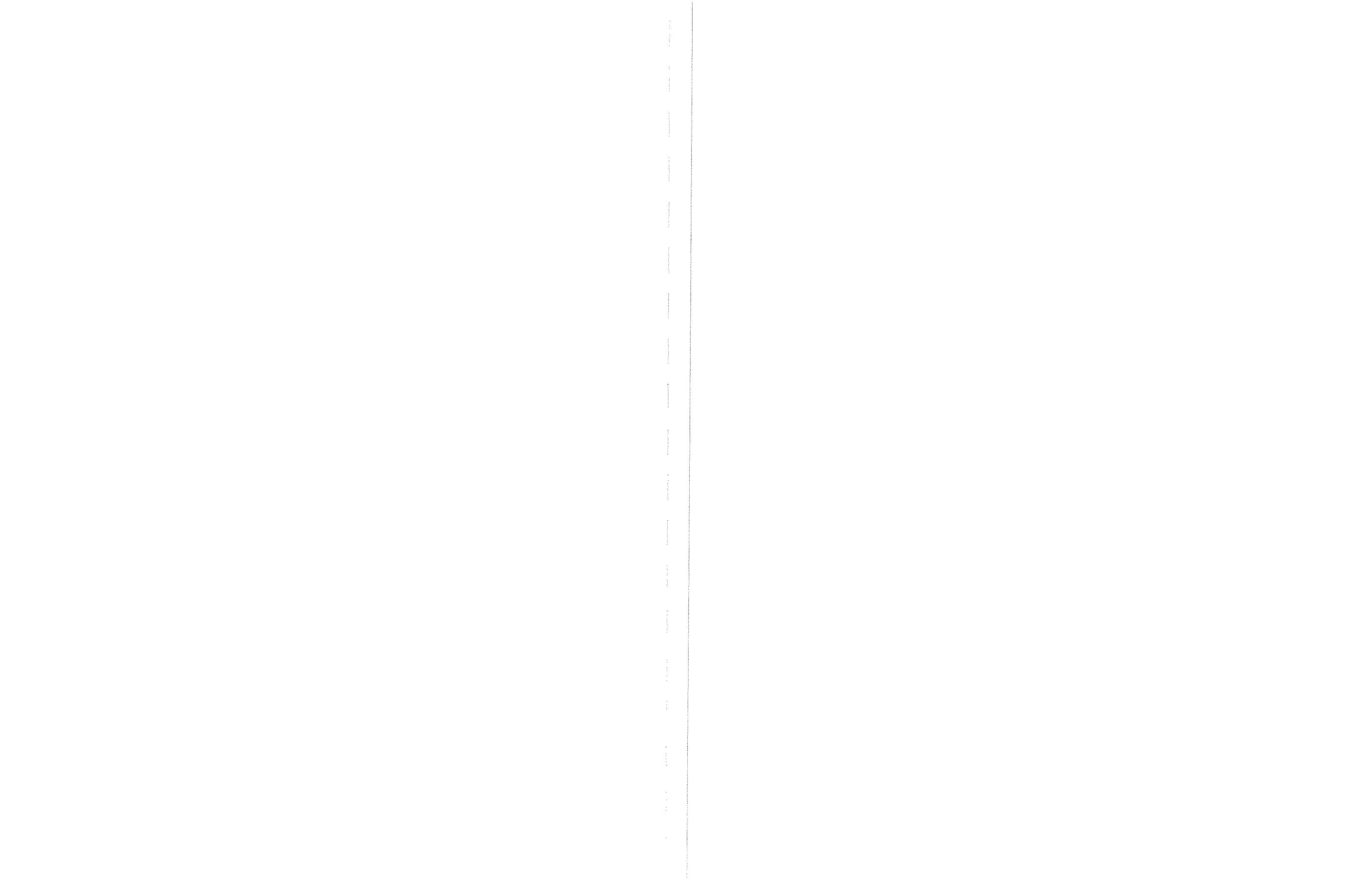


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1433	20253-1434	20253-1435	20253-1436																
Location Code	ST-16A-SB-39	ST-16A-SB-40	ST-16A-SB-41	ST-16A-SB-42																
Date Sampled	05/24/00	05/24/00	05/24/00	05/24/00																
Depth (feet below ground surface)	Surface	Surface	Surface	Surface																
	Unit	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL	Result QFr	RDL	MDL	
CA LUFT 8015M																				
TPH as Diesel	mg/kg	19	.89	11 U	10.6	.833	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
TPH as Gasoline	mg/kg	1.1 U	.0213	1.1 U	1.06	.0212	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Unknown Hydrocarbons	mg/kg	NA		NA																
EPA 6010																				
Aluminum	mg/kg	9000	33.4	1.08	16000	52.9	1.07	NA	NA	NA	NA									
Antimony	mg/kg	11 U	10.7	5.71	11 U	10.6	5.66	NA	NA	NA	NA									
Arsenic	mg/kg	7.8	.53	.30	6.9	.53	.30	NA	NA	NA	NA									
Barium	mg/kg	150	1.07	0.04	120	1.06	0.04	NA	NA	NA	NA									
Beryllium	mg/kg	0.66	.21	0.01	0.59	.21	0.01	NA	NA	NA	NA									
Cadmium	mg/kg	1.1 U	1.07	0.11	1.1 U	1.06	0.11	NA	NA	NA	NA									
Calcium	mg/kg	19000	107	2.40	15000	106	2.38	NA	NA	NA	NA									
Chromium	mg/kg	21	1.07	0.59	19	1.06	0.58	NA	NA	NA	NA									
Cobalt	mg/kg	7.3	2.13	0.90	6.9	2.12	0.89	NA	NA	NA	NA									
Copper	mg/kg	24	1.07	0.15	22	1.06	0.15	NA	NA	NA	NA									
Iron	mg/kg	24000	5.34	.62	21000	5.29	.61	NA	NA	NA	NA									
Lead	mg/kg	26	.32	.009	17	.32	.009	NA	NA	NA	NA									
Magnesium	mg/kg	11000	107	5.90	8700	106	5.85	NA	NA	NA	NA									
Manganese	mg/kg	430	2.13	0.13	380	2.12	0.13	NA	NA	NA	NA									
Molybdenum	mg/kg	2.4	2.13	0.65	2.1 U	2.12	0.65	NA	NA	NA	NA									
Nickel	mg/kg	16	2.13	0.66	15	2.12	0.66	NA	NA	NA	NA									
Potassium	mg/kg	3400	107	55.8	3100	106	55.3	NA	NA	NA	NA									
Selenium	mg/kg	0.53 U	.53	.26	0.53 U	.53	.25	NA	NA	NA	NA									
Silver	mg/kg	1.1 U	1.07	0.88	1.1 U	1.06	0.87	NA	NA	NA	NA									
Sodium	mg/kg	600	107	0	590	106	0	NA	NA	NA	NA									
Thallium	mg/kg	1.1 U	1.07	0.37	1.2	1.06	0.36	NA	NA	NA	NA									
Tin	mg/kg	NA			NA			NA	NA	NA	NA									
Vanadium	mg/kg	45	1.07	0.42	40	1.06	0.41	NA	NA	NA	NA									
Zinc	mg/kg	82	2.13	0.18	77	2.12	0.18	NA	NA	NA	NA									
EPA 7471A																				
Mercury	mg/kg	0.11 U	107	.0299	0.11 U	106	.0296	NA	NA	NA	NA									
4,4'-DDD	µg/kg	NA			NA			NA	NA	NA	NA									
4,4'-DDE	µg/kg	NA			NA			NA	NA	NA	NA									
4,4'-DDT	µg/kg	NA			NA			NA	NA	NA	NA									
Aldrin	µg/kg	NA			NA			NA	NA	NA	NA									
alpha-BHC	µg/kg	NA			NA			NA	NA	NA	NA									
alpha-Chlordane	µg/kg	NA			NA			NA	NA	NA	NA									
Aroclor-1016	µg/kg	NA			NA			NA	NA	NA	NA									
Aroclor-1221	µg/kg	NA			NA			NA	NA	NA	NA									

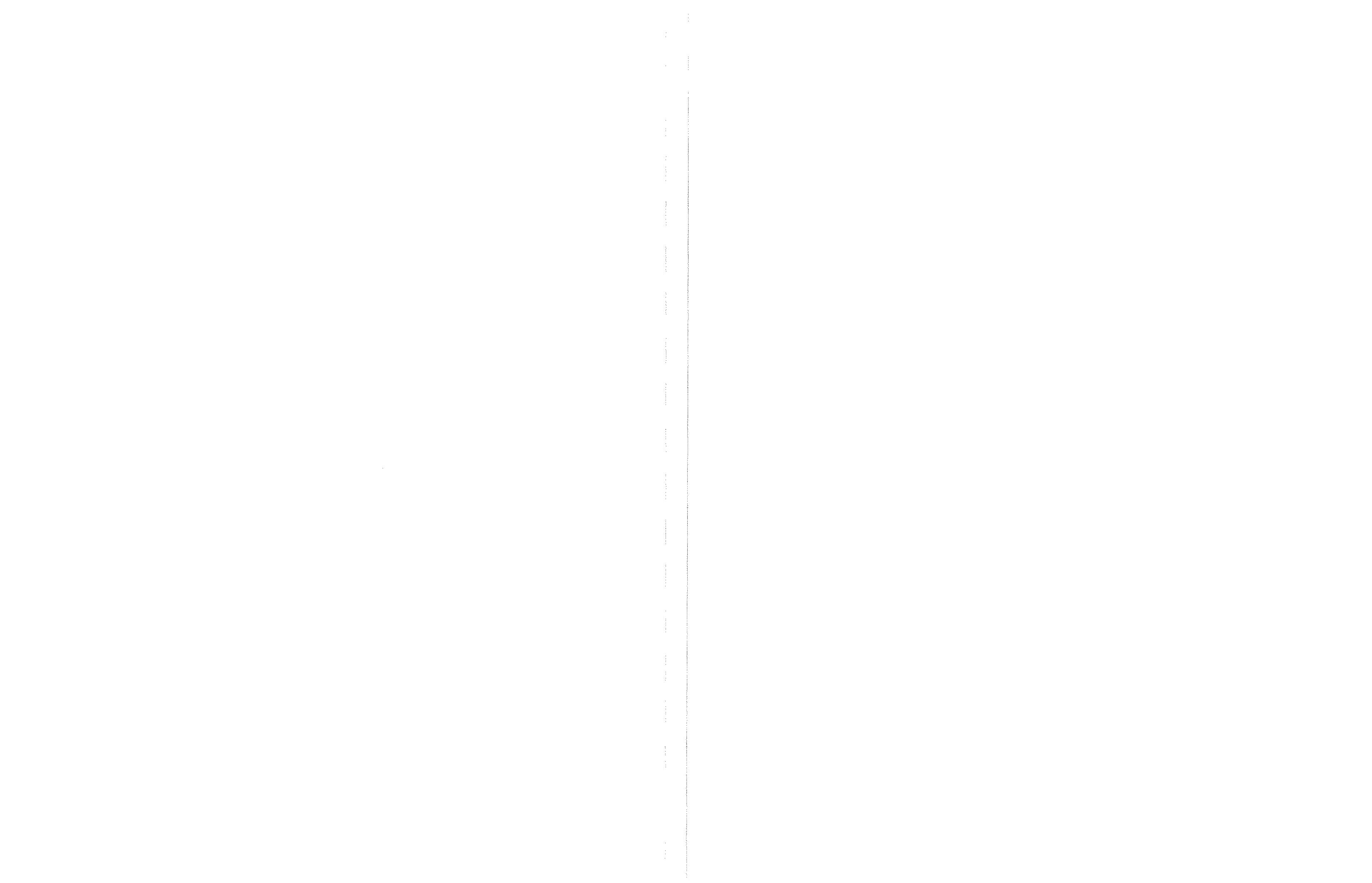


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	20253-1433				20253-1434				20253-1435				20253-1436			
				ST-16A-SB-39 05/24/00 Surface				ST-16A-SB-40 05/24/00 Surface				ST-16A-SB-41 05/24/00 Surface				ST-16A-SB-42 05/24/00 Surface			
				Unit	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL	Result Qlf	RDL	MDL
Aroclor-1232				µg/kg	NA			NA			NA			NA			NA		
Aroclor-1242				µg/kg	NA			NA			NA			NA			NA		
Aroclor-1248				µg/kg	NA			NA			NA			NA			NA		
Aroclor-1254				µg/kg	NA			NA			NA			NA			NA		
Aroclor-1260				µg/kg	NA			NA			NA			NA			NA		
Beta-BHC				µg/kg	NA			NA			NA			NA			NA		
Delta-BHC				µg/kg	NA			NA			NA			NA			NA		
Dieldrin				µg/kg	NA			NA			NA			NA			NA		
Endosulfan I				µg/kg	NA			NA			NA			NA			NA		
Endosulfan II				µg/kg	NA			NA			NA			NA			NA		
Endosulfan sulfate				µg/kg	NA			NA			NA			NA			NA		
Endrin				µg/kg	NA			NA			NA			NA			NA		
Endrin aldehyde				µg/kg	NA			NA			NA			NA			NA		
gamma-BHC				µg/kg	NA			NA			NA			NA			NA		
gamma-Chlordane				µg/kg	NA			NA			NA			NA			NA		
Heptachlor				µg/kg	NA			NA			NA			NA			NA		
Heptachlor epoxide				µg/kg	NA			NA			NA			NA			NA		
Methoxychlor				µg/kg	NA			NA			NA			NA			NA		
Toxaphene	<i>EPA 8260A</i>				µg/kg	NA		NA			NA			NA			NA		
1,1,1-Trichloroethane				µg/kg	NA			NA			NA			NA			NA		
1,1,2,2-Tetrachloroethane				µg/kg	NA			NA			NA			NA			NA		
1,1,2-Trichloro-1,2,2-trifluoroethane				µg/kg	NA			NA			NA			NA			NA		
1,1,2-Trichloroethane				µg/kg	NA			NA			NA			NA			NA		
1,1-Dichlorethane				µg/kg	NA			NA			NA			NA			NA		
1,1-Dichloroethylene				µg/kg	NA			NA			NA			NA			NA		
1,2,3-Trichloropropane				µg/kg	NA			NA			NA			NA			NA		
1,2-Dichloroethane				µg/kg	NA			NA			NA			NA			NA		
1,2-Dichloropropane				µg/kg	NA			NA			NA			NA			NA		
2-Butanone (MEK)				µg/kg	NA			NA			NA			NA			NA		
2-Chloroethyl vinyl ether				µg/kg	NA			NA			NA			NA			NA		
2-Hexanone				µg/kg	NA			NA			NA			NA			NA		
4-Methyl-2-pentanone (MIBK)				µg/kg	NA			NA			NA			NA			NA		
Acetone				µg/kg	NA			NA			NA			NA			NA		
Benzene				µg/kg	NA			NA			NA			NA			NA		
Bromodichloromethane				µg/kg	NA			NA			NA			NA			NA		
Bromoform				µg/kg	NA			NA			NA			NA			NA		
Bromonmethane				µg/kg	NA			NA			NA			NA			NA		
Carbon disulfide				µg/kg	NA			NA			NA			NA			NA		
Carbon tetrachloride				µg/kg	NA			NA			NA			NA			NA		

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	Location Code	Date Sampled	Depth (feet below ground surface)	Unit	Result Qfr	RDL	MDL									
Chlorobenzene		20253-1433 ST-16A-SB-39 05/24/00	Surface	µg/kg	NA			NA			NA			NA		
Chloroethane				µg/kg	NA			NA			NA			NA		
Chloroform				µg/kg	NA			NA			NA			NA		
Chloromethane				µg/kg	NA			NA			NA			NA		
cis-1,2-Dichloroethylene				µg/kg	NA			NA			NA			NA		
cis-1,3-Dichloropropene				µg/kg	NA			NA			NA			NA		
Dibromochloromethane				µg/kg	NA			NA			NA			NA		
Dichlorodifluoromethane				µg/kg	NA			NA			NA			NA		
Ethylbenzene				µg/kg	NA			NA			NA			NA		
Methyl tert-butyl ether (MTBE)				µg/kg	NA			NA			NA			NA		
Methylene chloride				µg/kg	NA			NA			NA			NA		
Styrene				µg/kg	NA			NA			NA			NA		
Tetrachloroethylene				µg/kg	NA			NA			NA			NA		
Toluene				µg/kg	NA			NA			NA			NA		
trans-1,2-Dichloroethene				µg/kg	NA			NA			NA			NA		
trans-1,3-Dichloropropene				µg/kg	NA			NA			NA			NA		
Trichloroethene				µg/kg	NA			NA			NA			NA		
Trichlorofluoromethane				µg/kg	NA			NA			NA			NA		
Vinyl acetate				µg/kg	NA			NA			NA			NA		
Vinyl chloride				µg/kg	NA			NA			NA			NA		
Xylenes (total) <i>EPA 4270</i>				µg/kg	NA			NA			NA			NA		
1,2,4-Trichlorobenzene				µg/kg	NA			NA			NA			NA		
1,2-Dichlorobenzene				µg/kg	NA			NA			NA			NA		
1,3-Dichlorobenzene				µg/kg	NA			NA			NA			NA		
1,4-Dichlorobenzene				µg/kg	NA			NA			NA			NA		
2,4,5-Trichlorophenol				µg/kg	NA			NA			NA			NA		
2,4,6-Trichlorophenol				µg/kg	NA			NA			NA			NA		
2,4-Dichlorophenol				µg/kg	NA			NA			NA			NA		
2,4-Dimethylphenol				µg/kg	NA			NA			NA			NA		
2,4-Dinitrophenol				µg/kg	NA			NA			NA			NA		
2,4-Dinitrotoluene				µg/kg	NA			NA			NA			NA		
2,6-Dinitrotoluene				µg/kg	NA			NA			NA			NA		
2-Chloronaphthalene				µg/kg	NA			NA			NA			NA		
2-Chlorophenol				µg/kg	NA			NA			NA			NA		
2-Methyl-4,6-dinitrophenol				µg/kg	NA			NA			NA			NA		
2-Methylnaphthalene				µg/kg	NA			NA			NA			NA		
2-Methylphenol				µg/kg	NA			NA			NA			NA		
2-Nitroaniline				µg/kg	NA			NA			NA			NA		
2-Nitrophenol				µg/kg	NA			NA			NA			NA		

Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification	20253-1433	20253-1434	20253-1435	20253-1436										
Location Code	ST-16A-SB-39	ST-16A-SB-40	ST-16A-SB-41	ST-16A-SB-42										
Date Sampled	05/24/00	05/24/00	05/24/00	05/24/00										
Depth (feet below ground surface)	Surface	Surface	Surface	Surface										
	Unit	Result Qlfr	RDL	MDL	Result Qlfr	RDL	MDL	Result Qlfr	RDL	MDL	Result Qlfr	RDL	MDL	
3,3'-Dichlorobenzidine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Methyl-4-chlorophenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-Nitroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Bromophenyl phenyl ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chloroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl phenyl ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Methylphenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitrophenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aniline	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzidine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benz[a]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[a]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzofluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzofluoropylene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo[k]fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzoc acid	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzyl acetoai	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chloroethoxy)methane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chlorothio)ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-chlorosorropyl)ether	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bis(2-ethylhexyl)phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bisphenol A	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Buyl benzyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbazole	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-butyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Di-n-octyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz[a]anthracene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Diehyli phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dimethyl phthalate	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorobutadiene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachlorocyclopentadiene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

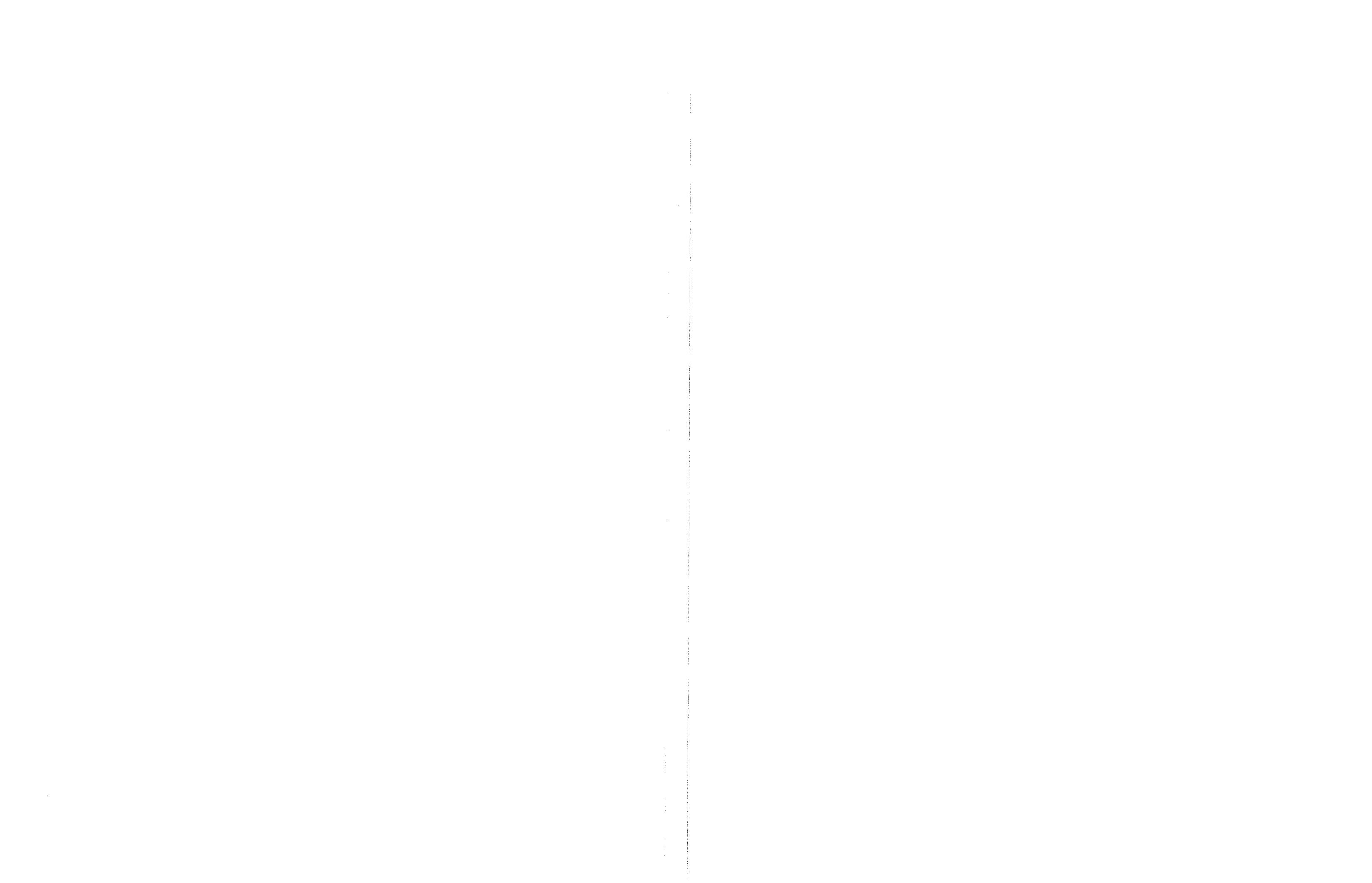


Table A-3
Analytical Results for Additional Soil Investigations of 1997 and 2000 — Site ST-16A and ST-16B, MCAS Tustin

Sample Identification Location Code Date Sampled Depth (feet below ground surface)	20253-1433			20253-1434			20253-1435			20253-1436			
	ST-16A-SB-39 05/24/00 Surface			ST-16A-SB-40 05/24/00 Surface			ST-16A-SB-41 05/24/00 Surface			ST-16A-SB-42 05/24/00 Surface			
	Unit	Result Qlfir	RDL	MDL	Result Qlfir	RDL	MDL	Result Qlfir	RDL	MDL	Result Qlfir	RDL	MDL
N-Nitrosodimethylamine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hexachloroethane	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hydroquinone	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Indeno[1,2,3-cd]pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isophorone	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-Nitrosodimethylamine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrobenzene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pentachlorophenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenol	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyridine	µg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>EPA 8310</i>													
Acenaphthene	µg/kg	110 U	110	48	1100 U	1100	470	110 U	110	50	110 U	110	48
Acenaphthylene	µg/kg	210 U	210	51	2100 U	2100	510	220 U	220	54	220 U	220	52
Anthracene	µg/kg	11 U	11	3.3	110 U	110	33	11 U	11	3.5	11 U	11	3.3
Benzol[a]anthracene	µg/kg	30	11	1.3	47 J	110	13	31	11	1.3	40	11	1.3
Benzol[a]pyrene	µg/kg	65	11	2.2	100 J	110	22	89	11	2.4	90	11	2.3
Benzol[b]fluoranthene	µg/kg	86	21	2.1	150 J	210	21	90	22	2.2	110	22	2.2
Benzol[b]phenanthrene	µg/kg	78	21	2	150 J	210	20	66	22	2.1	97	22	2
Benzof[a]fluoranthene	µg/kg	37	11	.96	64 J	110	9.5	40	11	1	51	11	.97
Chrysene	µg/kg	40	11	1.6	70 J	110	16	35	11	1.7	59	11	1.6
Dibenz[a,h]anthracene	µg/kg	21 U	21	6.6	210 U	210	66	22 U	22	7	11 J	22	6.7
Fluoranthene	µg/kg	58	21	4.5	76 J	210	44	54	22	4.7	78	22	4.5
Fluorene	µg/kg	21 U	21	9.2	210 U	210	91	22 U	22	9.7	22 U	22	9.3
Indeno[1,2,3-cd]pyrene	µg/kg	110	11	.75	190	110	7.4	83	11	.79	110	11	.75
Naphthalene	µg/kg	110 U	110	31	1100 U	1100	310	110 U	110	32	110 U	110	31
Phenanthrene	µg/kg	29	21	4.8	210 U	210	48	29	22	5.1	40	22	4.8
Pyrene	µg/kg	67	21	1.5	99 J	210	15	92	22	1.6	94	22	1.5
Cyanide	mg/kg	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Qlfir = qualifier

RDL = reportable detection limit

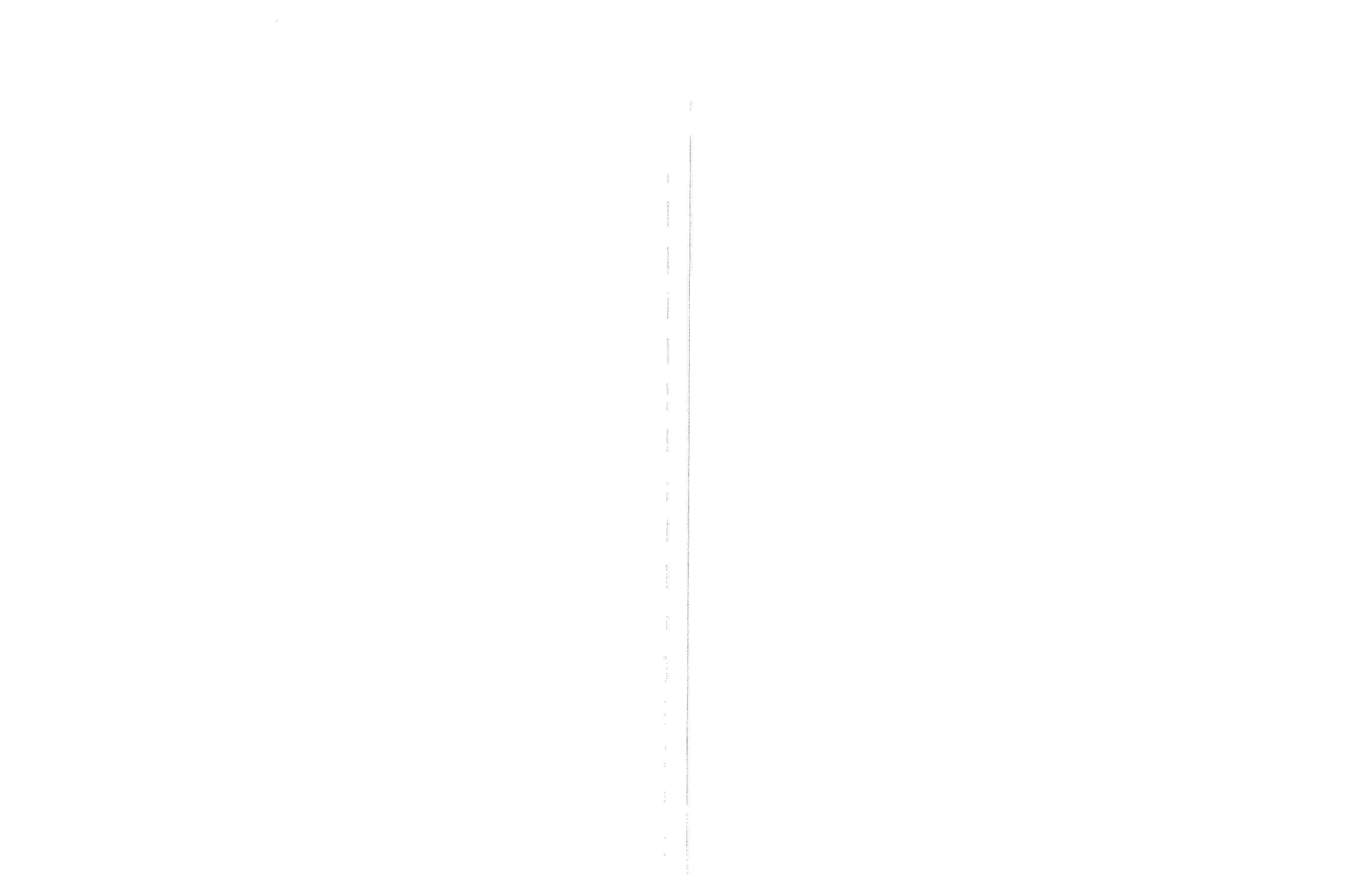
MDL = method detection limit

µg/kg = micrograms per kilogram

UJ = indicates the analyte was not detected at or above the stated limit. The sample detection limit is an estimate

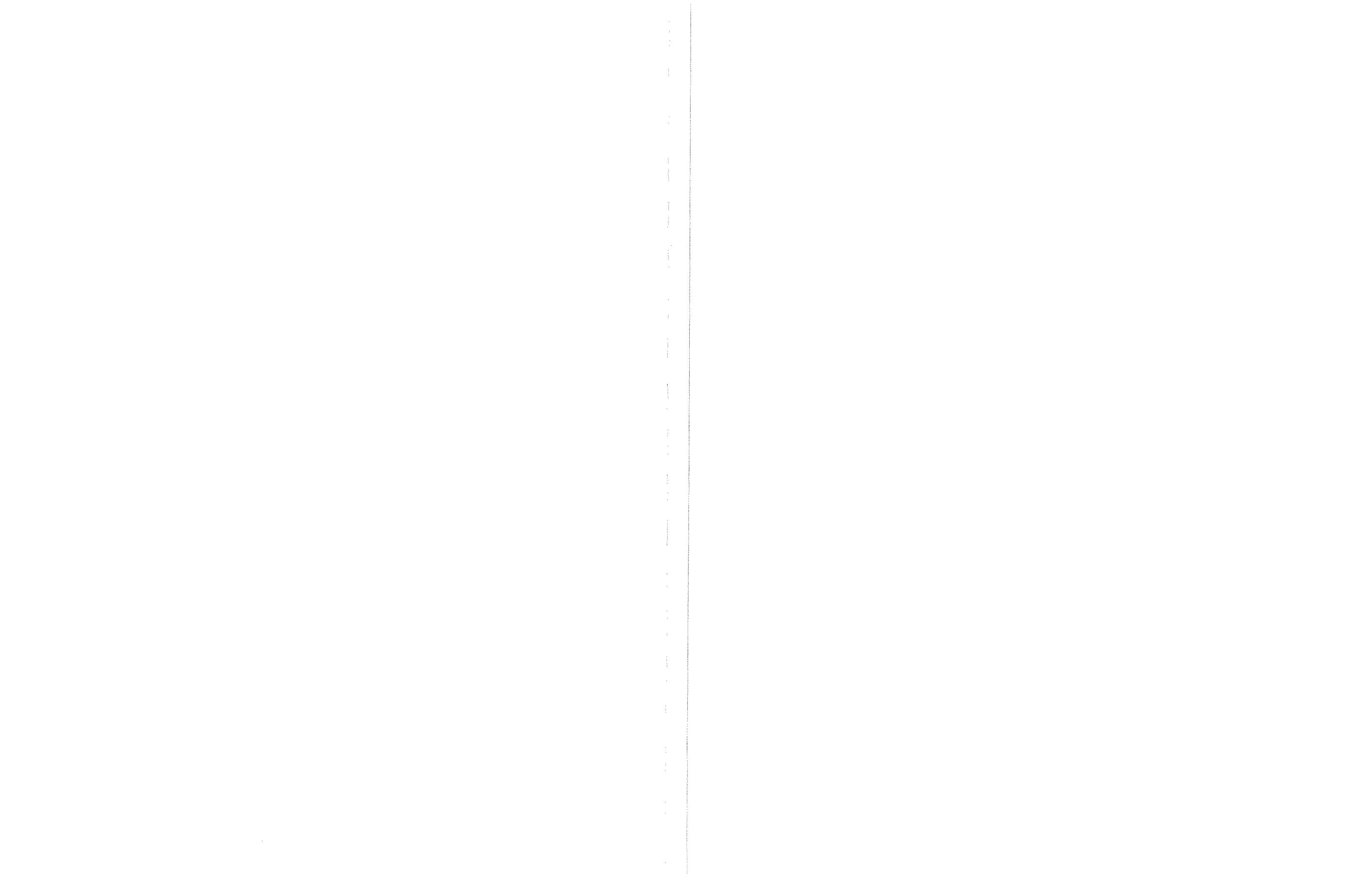
J = indicates an estimated value.

U = indicates the analyte was not detected at or above the stated limit.



**Table A-4: Summary of Benzo(a)pyrene Equivalent Concentrations at all ST-16A/B Sampling Locations,
except Initial Soil Sampling Locations of 1996**

Sample ID	Location ID	Depths of sample Collection (feet below ground surface)	Total B(a)P Equivalents (µg/kg)
Confirmation Sample After Removal Action of April 1997			
17306-1000	ST-16A-SW-05	1	359
17306-1001	ST-16A-SW-06	0.5	202
17306-1002	ST-16A-SW-07	0.5	72
17306-1003	ST-16A-SW-08	0.5	60
17306-1004	ST-16A-SW-09	1	569
17306-1005	ST-16A-SW-10	0.5	227
17306-1006	ST-16A-SW-11	0.5	607
17306-1007	ST-16A-BF-01	1	853
17306-1008	ST-16A-BF-02	0.5	36
17306-1009	ST-16A-BF-03	0.5	388
17306-996	ST-16A-SW-01	0.5	25
17306-997	ST-16A-SW-02	0.5	522
17306-998	ST-16A-SW-03	0.5	1300
17306-999	ST-16A-SW-04	0.5	247
Additional Soil Borings After Removal Action of May and June 1997			
17306-1120	ST-16A-SB-06	Surface	360
17306-1121	ST-16A-SB-07	Surface	237
17306-1122	ST-16A-SB-08	Surface	117
17306-1123	ST-16A-SB-09	Surface	548
17306-1124	ST-16A-SB-10	Surface	526
17306-1173	ST-16A-SB-11	-	411
17306-1174	ST-16A-SB-12	0.5	538
17306-1175	ST-16A-SB-13	0.5	206
17306-1176	ST-16A-SB-14	0.5	76
17306-1177	ST-16A-SB-15	-	60
17306-1178	ST-16A-SB-16	0.5	151
17306-1179	ST-16A-SB-17	-	177
17306-1180	ST-16A-SB-18	0.5	0
17306-1181	ST-16A-SB-19	-	189
17306-1182	ST-16A-SB-20	0.5	237
17306-1183	ST-16A-SB-21	0.5	335
Additional Sampling After Removal Action of April/May 2000			
20253-1397	ST-16A-SB-22	Surface	3887
20253-1398	ST-16A-SB-22	2	96
20253-1399	ST-16A-SB-23	Surface	2410
20253-1400	ST-16A-SB-24	Surface	2820
20253-1401	ST-16A-SB-24	2	79
20253-1402	ST-16A-SB-25	Surface	4076
20253-1403	ST-16A-SB-26	Surface	8819
20253-1404	ST-16A-SB-26	2	21
20253-1405	ST-16A-SB-27	Surface	3303
20253-1406	ST-16A-SB-28	Surface	191
20253-1407	ST-16A-SB-28	2	0
20253-1408	ST-16A-SB-29	Surface	1634
20253-1409	ST-16A-SB-30	Surface	328
20253-1410	ST-16A-SB-30	2	2
20253-1419	ST-16A-SB-31	Surface	423
20253-1420	ST-16A-SB-32	Surface	364



**Table A-4: Summary of Benzo(a)pyrene Equivalent Concentrations at all ST-16A/B Sampling Locations,
except Initial Soil Sampling Locations of 1996**

Sample ID	Location ID	Depths of sample Collection (feet below ground surface)	Total B(a)P Equivalents ($\mu\text{g}/\text{kg}$)
20253-1421	ST-16A-SB-32	2	292
20253-1422	ST-16A-SB-33	Surface	47
20253-1423	ST-16A-SB-33	2	139
20253-1424	ST-16A-SB-34	Surface	1117
20253-1425	ST-16A-SB-34	2	14
20253-1426	ST-16A-SB-35	Surface	312
20253-1427	ST-16A-SB-35	2	7
20253-1428	ST-16A-SB-36	Surface	304
20253-1429	ST-16A-SB-36	Surface	271
20253-1430	ST-16A-SB-36	2	10
20253-1431	ST-16A-SB-37	Surface	284
20253-1432	ST-16A-SB-38	Surface	210
20253-1433	ST-16A-SB-39	Surface	88
20253-1434	ST-16A-SB-40	Surface	139
20253-1435	ST-16A-SB-41	Surface	110
20253-1436	ST-16A-SB-42	Surface	128

NOTES:

ID Identification

Sampling depth unknown

$\mu\text{g}/\text{kg}$ micrograms per kilogram



Appendix B
Risk Screening Tables for Representative Data Set

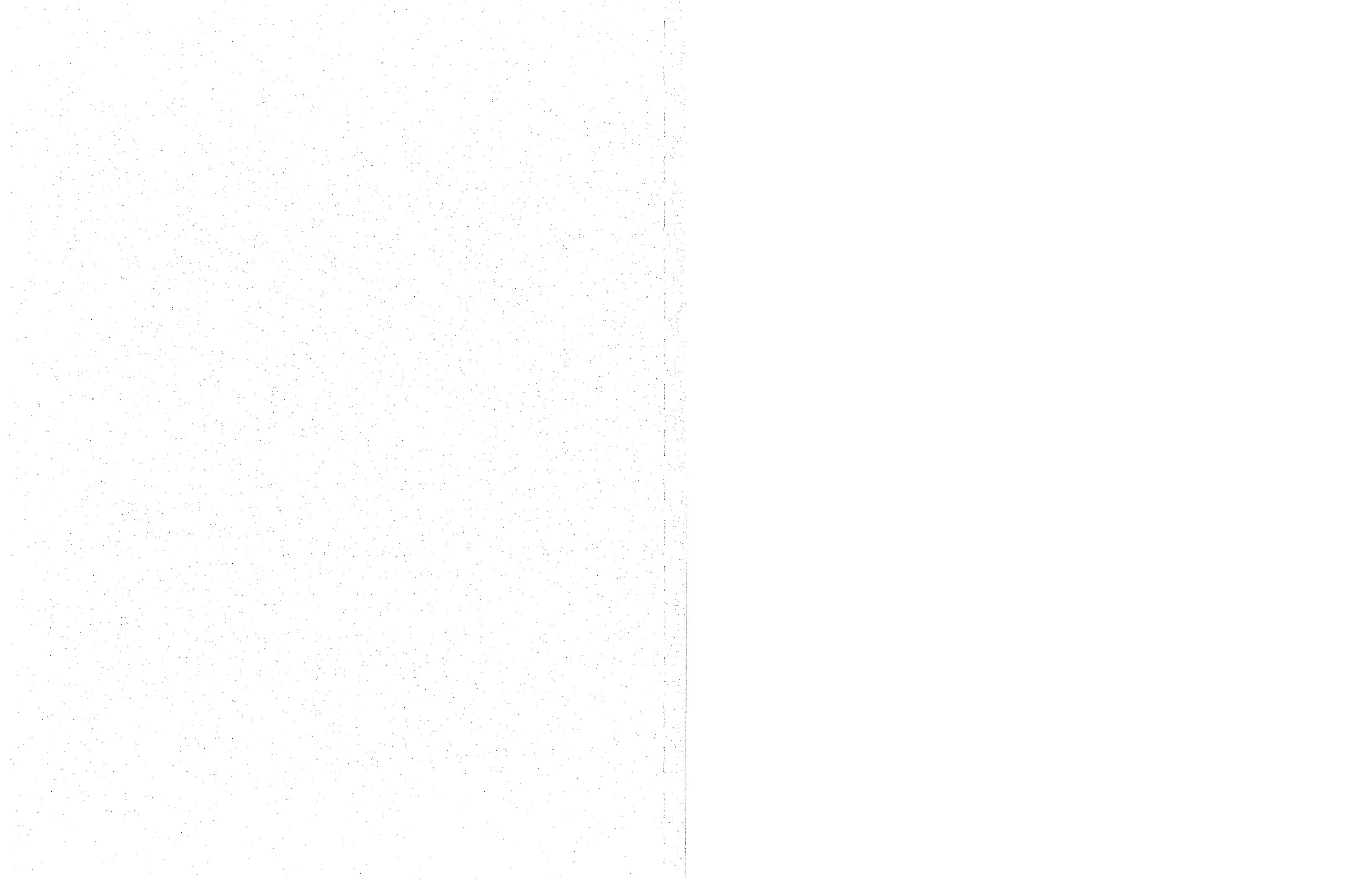


Table B-1 Soil Sampling Information –ST-16A/B

Type	Sample ID	Location Code	Date Sampled	Depth (feet bgs)	EPA Method 8270	EPA Method 8310
Initial Soil Borings Before Removal Action						
Soil Borings (8 samples)	17306-737	ST-16A-SB-01	11/22/96	Surface	*	NA
	17306-738	ST-16A-SB-01	11/22/96	3.0	NA	NA
	17306-729	ST-16A-SB-02	11/22/96	3.0	*	NA
	17306-731	ST-16A-SB-03	11/22/96	3.0	*	NA
	17306-733	ST-16A-SB-04	11/22/96	3.0	*	NA
	17306-734	ST-16A-SB-05	11/22/96	Surface	*	NA
	17306-735 (Dup)	ST-16A-SB-05	11/22/96	Surface	*	NA
	17306-736	ST-16A-SB-05	11/22/96	3.0	NA	NA
Confirmation Sample After Removal Action						
Excavation (14 samples)	17306-996	ST-16A-SW-01	04/13/97	1.0	*	NA
	17306-997	ST-16A-SW-02	04/13/97	0.5	*	NA
	17306-998	ST-16A-SW-03	04/13/97	0.5	*	NA
	17306-999	ST-16A-SW-04	04/13/97	0.5	*	NA
	17306-1000	ST-16A-SW-05	04/13/97	1.0	*	NA
	17306-1001	ST-16A-SW-06	04/13/97	0.5	*	NA
	17306-1002	ST-16A-SW-07	04/13/97	0.5	*	NA
	17306-1003	ST-16A-SW-08	04/13/97	1.0	*	NA
	17306-1004	ST-16A-SW-09	04/13/97	0.5	*	NA
	17306-1005	ST-16A-SW-10	04/13/97	0.5	*	NA
	17306-1006 (Dup)	ST-16A-SW-11	04/13/97	0.5	*	NA
	17306-1007	ST-16A-BF-01	04/13/97	0.5	*	NA
	17306-1008	ST-16A-BF-02	04/13/97	0.5	*	NA
	17306-1009	ST-16A-BF-03	04/13/97	0.5	*	NA
Additional Soil Borings After Removal Action						
Soil Borings	17306-1120	ST-16A-SB-06	05/30/97	Surface	*	NA

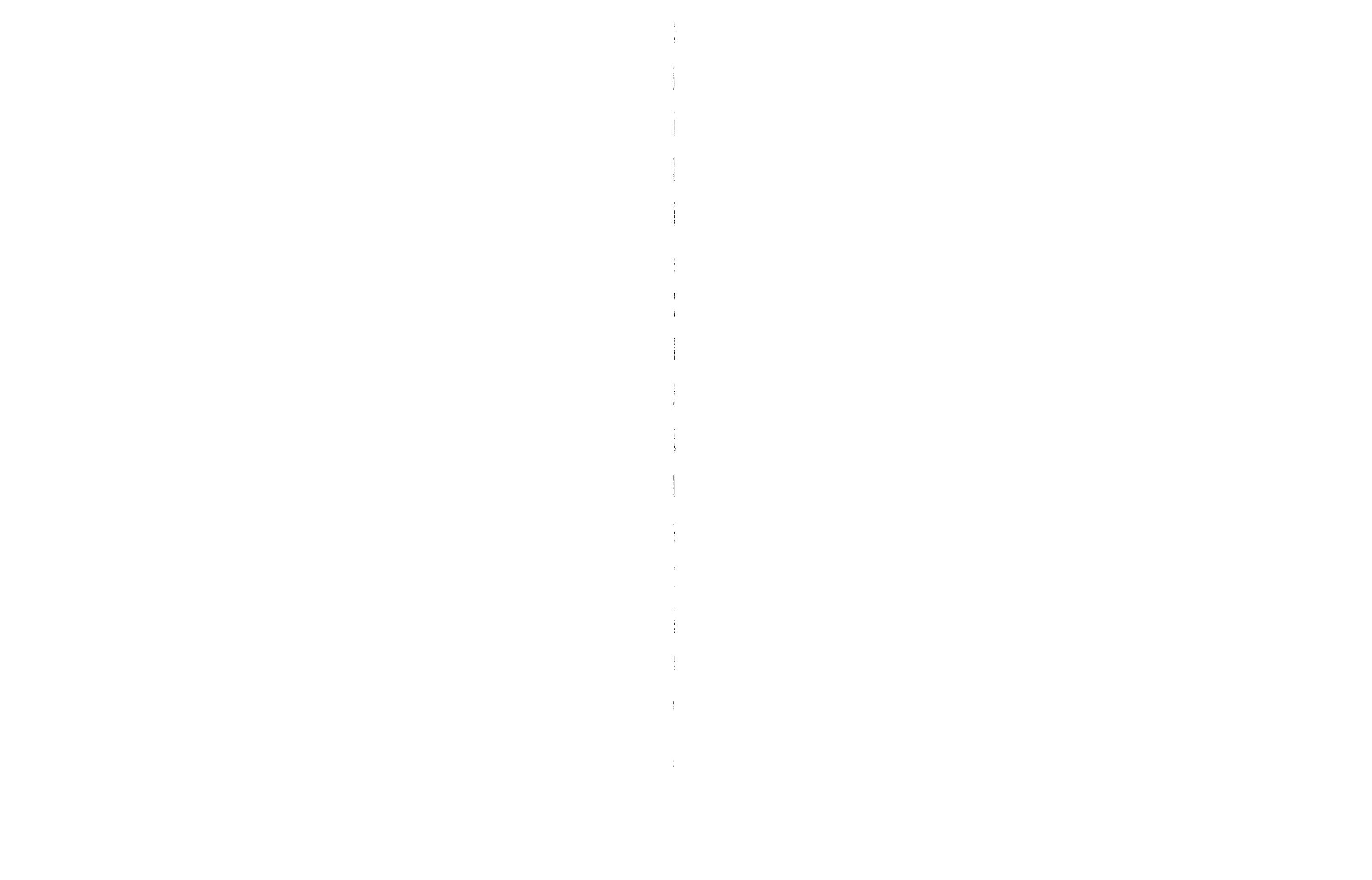


Table B-1 Soil Sampling Information -ST-16A/B

Type	Sample ID	Location Code	Date Sampled	Depth (feet bgs)	EPA Method 8270	EPA Method 8310
	20253-1406	ST-16A-SB-28	05/12/00	Surface	*	*
	20253-1407	ST-16A-SB-28	05/12/00	2.0	*	*
	20253-1408	ST-16A-SB-29	05/12/00	Surface	NA	*
	20253-1409	ST-16A-SB-30	05/12/00	Surface	*	*
	20253-1410	ST-16A-SB-30	05/12/00	2.0	*	*
	20253-1419	ST-16A-SB-31	05/23/00	Surface	NA	*
	20253-1420	ST-16A-SB-32	05/23/00	Surface	NA	*
	20253-1421	ST-16A-SB-32	05/23/00	2.0	NA	*
	20253-1422	ST-16A-SB-33	05/23/00	Surface	NA	*
	20253-1423	ST-16A-SB-33	05/23/00	2.0	NA	*
	20253-1424	ST-16A-SB-34	05/23/00	Surface	NA	*
	20253-1425	ST-16A-SB-34	05/23/00	2.0	NA	*
	20253-1426	ST-16A-SB-35	05/23/00	Surface	NA	*
	20253-1427	ST-16A-SB-35	05/23/00	2.0	NA	*
	20253-1428	ST-16A-SB-36	05/23/00	Surface	NA	*
	20253-1429 (Dup)	ST-16A-SB-36	05/23/00	Surface	NA	*
	20253-1430	ST-16A-SB-36	05/23/00	2.0	NA	*
	20253-1431	ST-16A-SB-37	05/24/00	Surface	NA	*
	20253-1432	ST-16A-SB-38	05/24/00	Surface	NA	*
	20253-1433	ST-16A-SB-39	05/24/00	Surface	NA	*
	20253-1434	ST-16A-SB-40	05/24/00	Surface	NA	*
	20253-1435	ST-16A-SB-41	05/24/00	Surface	NA	*
	20253-1436	ST-16A-SB-42	05/24/00	Surface	NA	*

NOTES:

* analyzed by the particular method

NA not analyzed

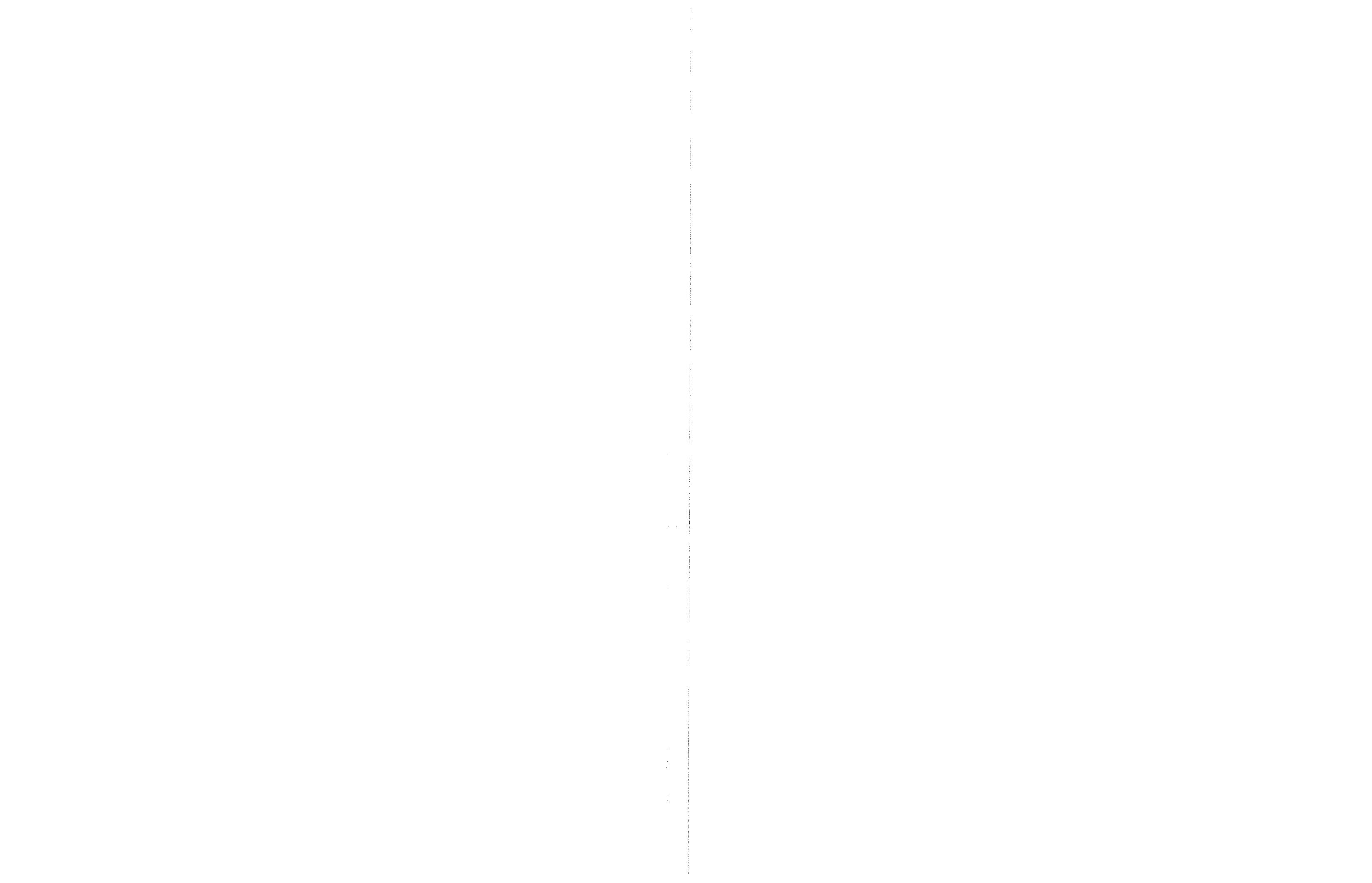


Table B-2: Screening PRE Comparison of Soil EPCs to Residential PRGs, Sites 16 A/B (Representative Data Set)

Chemical	Number of Detects	Sample Size ^a	Frequency of Detection	Max EPC ^b (mg/kg)	95% UCL of Arithmetic Mean (mg/kg)	RME EPC ^c (mg/kg)	Background Concentration (mg/kg)	Carcinogenic PRG ^d (mg/kg)	Noncarcinogenic PRG ^d (mg/kg)	RME EPC Comparisons						Background Calculations																			
										Carcinogenic			Noncarcinogenic			>PRG (ca)		Excess Cancer Risk ^e		% Contribution to Risk Including BG		>PRG (nc)		HQ ^f		% Contribution to HI Including BG		Site 99th Percentile		99th Percentile > Background?		Excess Risk due to Background		HI due to Background	
										>PRG	Excess Cancer Risk ^e	% Contribution to Risk Including BG	>PRG	HQ ^f	% Contribution to HI Including BG	Site 99th Percentile	99th Percentile > Background?	Excess Risk due to Background	HI due to Background																
Volatile Organic Chemicals (Method 8260A):																																			
Methylene chloride	12	16	75%	6.2E-03	4.4E-03	4.4E-03	—	8.9E+00	1.9E+03	No	5.0E-10	0%	No	2.3E-06	0%	—	—	—	—	—	—	—	—	—	—										
Semivolatile Organic Chemicals (Method 8270):																																			
Bis(2-ethylhexyl)phthalate	29	40	73%	6.5E-01	2.2E-01	2.2E-01	—	3.5E+01	1.2E+03	No	6.2E-09	0%	No	1.8E-04	0%	—	—	—	—	—	—	—	—	—	—										
Butyl benzyl phthalate	14	40	35%	3.3E-01	2.9E-01	2.9E-01	—	—	1.2E+04	—	—	—	No	2.3E-05	0%	—	—	—	—	—	—	—	—	—	—										
Diethyl phthalate	1	40	3%	1.7E-01	2.4E-01	1.7E-01	—	—	4.9E+04	—	—	—	No	3.5E-06	0%	—	—	—	—	—	—	—	—	—	—										
Polycyclic Aromatic Hydrocarbons (Methods 8270 and 8310):																																			
Acenaphthylene	1	62	2%	7.9E-02	8.4E-01	7.9E-02	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—										
Anthracene	11	62	18%	5.0E-01	2.5E-01	2.5E-01	—	—	2.2E+04	—	—	—	No	1.1E-05	0%	—	—	—	—	—	—	—	—	—	—										
Benzo(a)anthracene	57	62	92%	3.7E+00	4.1E-01	4.1E-01	—	6.2E-01	—	No	6.6E-07	1%	—	—	—	—	—	—	—	—	—	—	—	—	—										
Benzo(a)pyrene	60	62	97%	6.1E+00	8.9E-01	8.9E-01	—	6.2E-02	—	Yes	1.4E-05	31%	—	—	—	—	—	—	—	—	—	—	—	—	—										
Benzo(b)fluoranthene	60	62	97%	6.9E+00	1.8E+00	1.8E+00	—	6.2E-01	—	Yes	2.9E-06	6%	—	—	—	—	—	—	—	—	—	—	—	—	—										
Benzo(g,h,i)perylene	59	62	95%	5.2E+00	8.8E-01	8.8E-01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—										
Benzo(k)fluoranthene	29	62	47%	5.2E+00	6.3E-01	6.3E-01	—	6.2E+00	—	No	1.0E-07	0%	—	—	—	—	—	—	—	—	—	—	—	—											
Chrysene	60	62	97%	6.7E+00	7.9E-01	7.9E-01	—	6.2E+01	—	No	1.3E-08	0%	—	—	—	—	—	—	—	—	—	—	—	—											
Dibenz(a,h)anthracene	26	62	42%	9.0E-01	2.0E-01	2.0E-01	—	6.2E-02	—	Yes	3.3E-06	7%	—	—	—	—	—	—	—	—	—	—	—	—											
Fluoranthene	52	62	84%	6.6E+00	8.1E-01	8.1E-01	—	—	2.3E+03	—	—	—	No	3.5E-04	0%	—	—	—	—	—	—	—	—	—											
Indeno(1,2,3-cd)pyrene	56	62	90%	6.6E+00	1.4E+00	1.4E+00	—	6.2E-01	—	Yes	2.3E-06	5%	—	—	—	—	—	—	—	—	—	—	—	—											
Phenanthrene	44	62	71%	3.2E+00	2.6E-01	2.6E-01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—											
Pyrene	55	62	89%	8.8E+00	9.3E-01	9.3E-01	—	—	2.3E+03	—	—	—	No	4.0E-04	0%	—	—	—	—	—	—	—	—	—											
Pesticides and PCBs (Method 8081):																																			
4,4'-DDD	3	16	19%	4.3E-03	2.8E-02	4.3E-03	—	2.4E+00	—	No	1.8E-09	0%	—	—	—	—	—	—	—	—	—	—	—	—											
4,4'-DDE	8	16	50%	2.1E-02	4.1E-02	2.1E-02	—	1.7E+00	—	No	1.2E-08	0%	—	—	—	—	—	—	—	—	—	—	—	—											
4,4'-DDT	6	16	38%	1.2E-02	2.9E-02	1.2E-02	—	1.7E+00	3.6E+01	No	7.0E-09	0%	No	3.3E-04	0%	—	—	—	—	—	—	—	—	—											
Dieldrin	1	16	6%	2.4E-03	2.7E-02	2.4E-03	—	3.0E-02	3.1E+00	No	7.9E-08	0%	No	7.9E-04	0%	—	—	—	—	—	—	—	—	—											
Heptachlor	1	16	6%	5.8E-04	2.0E-02	5.8E-04	—	1.1E-01	3.1E+01	No	5.4E-09	0%	No	1.9E-05	0%	—	—	—	—	—	—	—	—	—											
Methoxychlor	3	16	19%	3.2E-02	1.4E-01	3.2E-02	—	—	3.1E+02	—	—	—	No	1.0E-04	0%	—	—	—	—	—	—	—	—	—											
Inorganic Chemicals (Method 6010):																																			
Aluminum	19	19	100%	2.4E+04	1.9E+04	3.6E+04	—	7.6E+04	—	—	—	—	No	2.5E-01	10%	2.4E+04	No	—	4.8E-01	—	—	—	—	—	—										
Arsenic	19	19	100%	1.4E+01	8.6E+00	8.6E+00	1.8E+01	3.9E-01	2.2E+01	Yes	2.2E-05</																								

Table B-2: Screening PRE Comparison of Soil EPCs to Residential PRGs, Sites 16 A/B (Representative Data Set)

Chemical	Number of Detects	Sample Size ^a	Frequency of Detection	Max EPC ^b (mg/kg)	95% UCL of Arithmetic Mean (mg/kg)	RME EPC ^c (mg/kg)	Background Concentration (mg/kg)	Carcinogenic PRG ^d (mg/kg)	Noncarcinogenic PRG ^d (mg/kg)	RME EPC Comparisons						Background Calculations									
										Carcinogenic			Noncarcinogenic			>PRG (ca)	Excess Cancer Risk ^e	% Contribution to Risk Including BG	>PRG (nc)	HQ ^f	% Contribution to HI Including BG	Site 99th Percentile	99th Percentile > Background	Excess Risk due to Background	HI due to Background
										>PRG	Excess Cancer Risk	% Contribution to Risk Including BG	>PRG	HQ	% Contribution to HI Including BG										

NOTES:

= no data or not applicable

ca = carcinogenic

% = percent

nc = noncarcinogenic

ug/kg = microgram per kilogram

HI = hazard index

mg/kg = milligrams per kilogram

BG = Background

^a Sample size does not include field or laboratory quality control samples; field duplicate result is averaged with original sample result.

^b Maximum exposure point concentration (EPC) is the maximum detected concentration of an analyte.

^c Reasonable maximum exposure (RME) EPC is the minimum of either the 95% upper confidence limit (UCL) of the arithmetic mean or the maximum EPC.

The 95% UCL is calculated as $e^{(\text{mean} + 0.5s^2 + sH/(n-1)^{0.5})}$, where mean = mean of the natural log transformed data; s = standard deviation of the natural log transformed data; H = H-statistic from EPA 1992; and n = number of samples.

^d Preliminary remediation goals (PRGs) are based on cancer risk or noncarcinogenic health effects, unless qualified with a "sat" (soil saturation concentration) or "max" (ceiling limit concentration). Excess cancer risks

or hazard quotients (HQs) are not calculated for chemicals of potential concern with non-risk-based PRGs (sat or max).

^e Excess cancer risk = $1E-06 \times (\text{RME EPC} / \text{Carcinogenic PRG})$

^f HQ = RME EPC / Noncarcinogenic PRG

^g An HQ for lead could not be determined because the PRGs for lead were developed using blood-lead levels and a reference dose is not available.

Shading identifies constituents with RME concentrations exceeding 2002 EPA Region IX PRGs

Table B-3: Screening PRE Comparison of Soil EPCs to Industrial PRGs, Sites 16 A/B (Representative Data Set)

Chemical	Number of Detects	Sample Size ^a	Frequency of Detection	Max EPC ^b (mg/kg)	95% UCL of Arithmetic Mean (mg/kg)	RME EPC ^c (mg/kg)	Background Concentration (mg/kg)	Carcinogenic PRG ^d (mg/kg)	Noncarcinogenic PRG ^d (mg/kg)	RME EPC Comparisons						Background Calculations				
										Carcinogenic			Noncarcinogenic							
										>PRG (ca)	Excess Cancer Risk ^e	% Contribution to Risk Including BG	>PRG (nc)	HQ ^f	% Contribution to HI Including BG	Site 99th Percentile	99th Percentile > Background?	Excess Risk due to Background	HI due to Background	
Volatile Organic Chemicals (Method 8260A):																				
Methylene Chloride	12	16	75%	6.2E-03	4.4E-03	4.4E-03	—	2.1E+01	9.8E+03	No	2.2E-10	0%	No	4.6E-07	0%	—	—	—	—	
Semivolatile Organic Chemicals (Method 8270):																				
Bis(2-ethylhexyl)phthalate	29	40	73%	6.5E-01	2.2E-01	2.2E-01	—	1.8E+02	1.8E+04	No	1.2E-09	0%	No	1.2E-05	0%	—	—	—	—	
Butyl benzyl phthalate	14	40	35%	3.3E-01	2.9E-01	2.9E-01	—	—	1.0E+05 max	—	—	—	No	— ^a	— ^a	—	—	—	—	
Diethyl phthalate	1	40	3%	1.7E-01	2.4E-01	1.7E-01	—	—	1.0E+05 max	—	—	—	No	— ^a	— ^a	—	—	—	—	
Polycyclic Aromatic Hydrocarbons (Methods 8270 and 8310):																				
Acenaphthylene	1	62	2%	7.9E-02	8.4E-01	7.9E-02	—	—	—	—	—	—	—	—	—	—	—	—	—	
Anthracene	11	62	18%	5.0E-01	2.5E-01	2.5E-01	—	—	—	—	—	—	—	—	—	—	—	—	—	
Benzo(a)anthracene	57	62	92%	3.7E+00	4.1E-01	4.1E-01	—	2.9E+00	—	No	1.4E-07	2%	—	—	—	—	—	—	—	
Benzo(a)pyrene	60	62	97%	6.1E+00	8.9E-01	8.9E-01	—	2.9E+01	—	Yes	3.1E-06	37%	—	—	—	—	—	—	—	
Benzo(b)fluoranthene	60	62	97%	8.9E+00	1.8E+00	1.8E+00	—	2.9E+00	—	No	6.3E-07	8%	—	—	—	—	—	—	—	
Benzo(g,h,i)perylene	59	62	95%	5.2E+00	8.8E-01	8.8E-01	—	—	—	—	—	—	—	—	—	—	—	—	—	
Benzo(k)fluoranthene	29	62	47%	5.2E+00	6.3E-01	6.3E-01	—	2.9E+01	—	No	2.2E-08	0%	—	—	—	—	—	—	—	
Chrysene	60	62	97%	6.7E+00	7.9E-01	7.9E-01	—	2.9E+02	—	No	2.7E-09	0%	—	—	—	—	—	—	—	
Dibenz(a,h)anthracene	26	62	42%	9.0E-01	2.0E-01	2.0E-01	—	2.9E-01	—	No	7.0E-07	8%	—	—	—	—	—	—	—	
Fluoranthene	52	62	84%	6.6E+00	8.1E-01	8.1E-01	—	—	3.0E+04	—	—	—	No	2.7E-05	0%	—	—	—	—	
Indeno(1,2,3-cd)pyrene	56	62	90%	6.6E+00	1.4E+00	1.4E+00	—	2.9E+00	—	No	5.0E-07	6%	—	—	—	—	—	—	—	
Phenanthrene	44	62	71%	3.2E+00	2.6E-01	2.6E-01	—	—	—	—	—	—	—	—	—	—	—	—	—	
Pyrene	55	62	89%	8.8E+00	9.3E-01	9.3E-01	—	—	5.4E+04	—	—	—	No	1.7E-05	0%	—	—	—	—	
Pesticides and PCBs (Method 8081):																				
1,4'-DDD	3	16	19%	4.3E-03	2.8E-02	4.3E-03	—	1.7E+01	—	No	2.5E-10	0%	—	—	—	—	—	—	—	
4,4'-DDE	8	16	50%	2.1E-02	4.1E-02	2.1E-02	—	1.2E+01	—	No	1.7E-09	0%	—	—	—	—	—	—	—	
4,4'-DDT	6	16	38%	1.2E-02	2.9E-02	1.2E-02	—	1.2E+01	7.3E+02	No	1.0E-09	0%	No	1.6E-05	0%	—	—	—	—	
Gieldrin	1	16	6%	2.4E-03	2.7E-02	2.4E-03	—	1.5E-01	4.4E+01	No	1.6E-08	0%	No	5.4E-05	0%	—	—	—	—	
Heptachlor	1	16	6%	5.8E-04	2.0E-02	5.8E-04	—	5.5E-01	4.4E+02	No	1.1E-09	0%	No	1.3E-06	0%	—	—	—	—	
Methoxychlor	3	16	19%	3.2E-02	1.4E-01	3.2E-02	—	—	4.4E+03	—	—	No	7.3E-06	0%	—	—	—	—		
Inorganic Chemicals (Method 6010):																				
Juminum	19	19	100%	2.4E+04	1.9E+04	1.9E+04	3.6E+04	—	1.0E+05 max	—	—	—	No	— ^a	— ^a	2.4E+04	No	—	— ^a	
Arsenic	19	19	100%	1.4E+01	8.6E+00	8.6E+00	1.8E+01	2.7E+00	4.4E+02	Yes	3.2E-06	38%	No	2.0E-02	35%	1.3E+01	No	6.4E-06	4.0E-02	
Barium	19	19	100%	2.2E+02	1.5E+02	1.5E+02	3.1E+02	—	1.0E+05 max	—	—	—	No	— ^a	— ^a	2.1E+02	No	—	— ^a	
Beryllium	19	19	100%	9.3E-01	7.1E-01	7.1E-01	1.1E+00	2.2E+03	3.7E+03	No	3.2E-10	0%	No	1.9E-04	0%	9.1E-01	No	4.9E-10	3.0E-04	
Cadmium	2	19	11%	1.4E+00	7.2E-01	7.2E-01	1.8E+00	3.0E+03	8.1E+02	No	2.4E-10	0%	No	8.9E-04	2%	1.4E+00	No	6.0E-10	2.2E-03	
Calcium	19	19	100%	3.0E+04	1.9E+04	1.9E+04	—	—	—	—	—	—	—	—	—	2.9E+04	—	—	—	
Chromium	19	19	100%	3.2E+01	2.5E+01	2.5E+01	3.9E+01	4.5E+02	—	No	5.5E-08	1%	—	—	—	3.1E+01	No	8.7E-08	—	
Cobalt	19	19	100%	1.2E+01	8.7E+00	8.7E+00	1.5E+01	—	1.0E+05 max	—	—	—	No	— ^a	— ^a	1.2E+01	No	—	— ^a	
Copper	19	19	100%	5.8E+01	2.9E+01	2.9E+01	4.2E+01	—	7.6E+04	—	—	—	No	3.8E-04	1%	5.3E+01	Yes	—	5.5E-04	
Iron	19	19	100%	3.2E+04	2.6E+04	2.6E+04	—	—	1.0E+05 max	—	—	—	No	— ^a	— ^a </					



Table B-3: Screening PRE Comparison of Soil EPCs to Industrial PRGs, Sites 16 A/B (Representative Data Set)

Chemical	Number of Detects	Sample Size ^a	Frequency of Detection	Max EPC ^b (mg/kg)	95% UCL of Arithmetic Mean (mg/kg)	RME EPC ^c (mg/kg)	Background Concentration (mg/kg)	Carcinogenic PRG ^d (mg/kg)	Noncarcinogenic PRG ^d (mg/kg)	RME EPC Comparisons						Background Calculations				
										Carcinogenic			Noncarcinogenic							
										>PRG (ca)	Excess Cancer Risk ^e	% Contribution to Risk Including BG	>PRG (nc)	HQ ^f	% Contribution to HI Including BG	Site 99th Percentile	99th Percentile > Background?	Excess Risk due to Background	HI due to Background	

NOTES:

= no data or not applicable

ca

= carcinogenic

% = percent

nc

= noncarcinogenic

ug/kg

= microgram per kilogram

HI

= hazard index

mg/kg

= milligrams per kilogram

BG

= Background

Sample size does not include field or laboratory quality control samples; field duplicate result is averaged with original sample result.

Maximum exposure point concentration (EPC) is the maximum detected concentration of an analyte.

^b Reasonable maximum exposure (RME) EPC is the minimum of either the 95% upper confidence limit (UCL) of the arithmetic mean or the maximum EPC.

The 95% UCL is calculated as $e^{(\text{mean} + 0.5s^2 + sH/(n-1)^{0.5})}$, where mean = mean of the natural log transformed data; s = standard deviation of the natural log transformed data; H = H-statistic from EPA 1992; and n = number of samples.

^c Preliminary remediation goals (PRGs) are based on cancer risk or noncarcinogenic health effects, unless qualified with a "sat" (soil saturation concentration) or "max" (ceiling limit concentration). Excess cancer risks or hazard quotients (HQs) are not calculated for chemicals of potential concern with non-risk-based PRGs (sat or max).

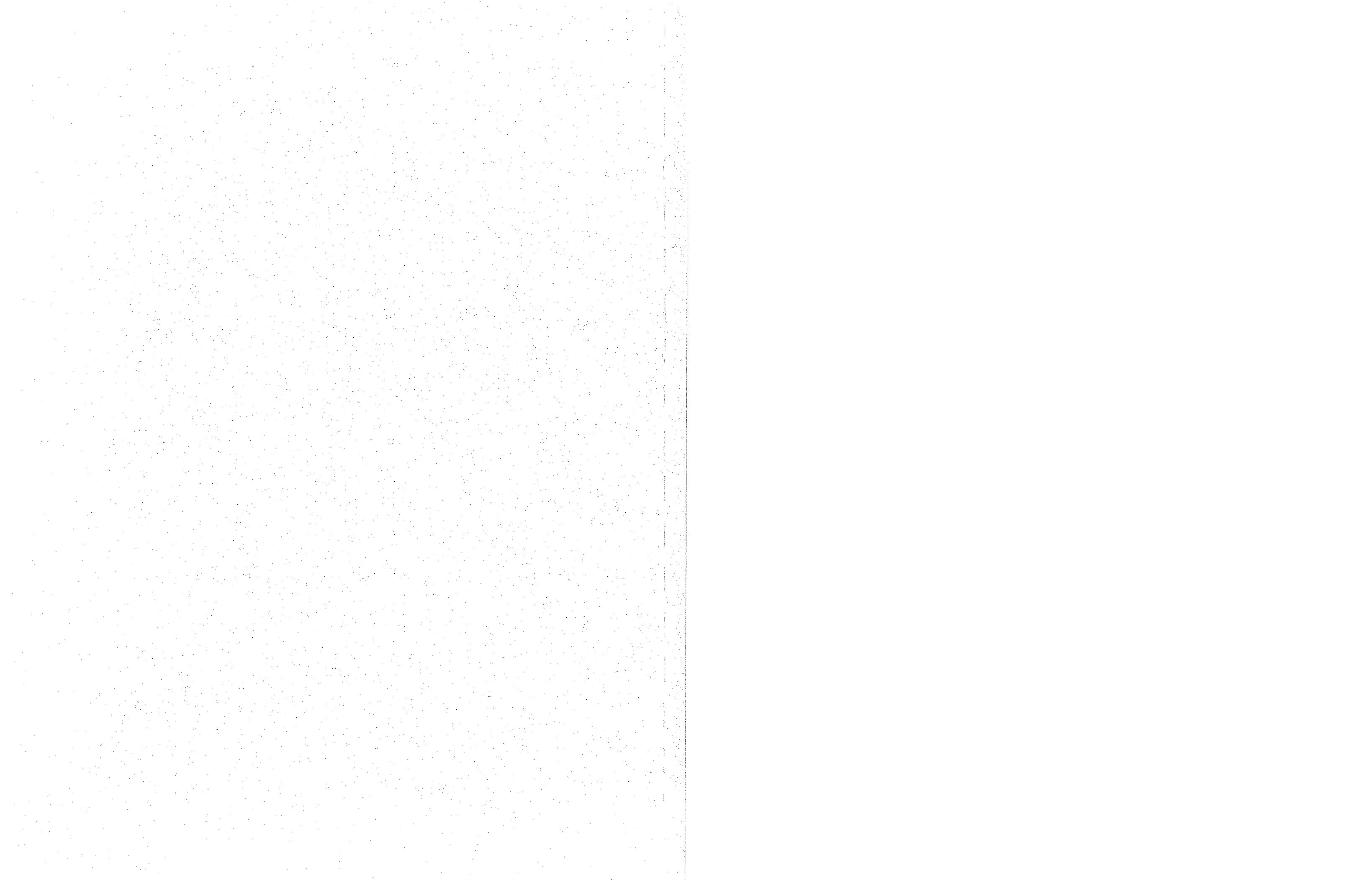
^d Excess cancer risk = $1E-06 \times (\text{RME EPC} / \text{Carcinogenic PRG})$

HQ = RME EPC / Noncarcinogenic PRG

An HQ for lead could not be determined because the PRGs for lead were developed using blood-lead levels and a reference dose is not available.

Shading identifies constituents with RME concentrations exceeding 2002 EPA Region IX PRGs.

Appendix C
Response to Comments and Correspondence Letters



Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: John P. Christopher, Ph.D., D.A.B.T. Staff Toxicologist, Human and Ecological Risk Division. Dated: 5 February 2003

Comment No./Reviewer	Section/ Page No.	Comment	Response
GENERAL COMMENTS			
1.	General	The report is clearly written and well documented. We agree with the navy's estimates of cancer risk and non-cancer hazard for these two sites. Remaining hot spots of carcinogenic polycyclic aromatic hydrocarbons (PAH) might not be compatible with unrestricted future use of the parcels.	Comment Noted. Please see response to Conclusions and Recommendations Comment #2.
SPECIFIC COMMENTS			
1.	Runoff of PAH from Paved Area, Section 3.4, page 3-1 and Figure 3-1	<p>The navy asserts that the source of elevated concentrations of PAH in soil was apparently runoff from the paved area which runs past both ST-16A and ST-16B. We note in Figure 3-1 that a total of eight of the 55 soil samples shown in Figure 3-1 have concentrations of the carcinogenic PAH expressed as Benzo(a)pyrene equivalents (BAPeq) greater than 1,000 µg/kg. Six of these eight were collected at the edge of the paved area. The six samples mentioned are scattered along the entire length of the paved area shown in Figure 3-1, with several samples with much lower concentrations of BAPeq interspersed. Therefore, we agree with the Navy that the paved area, not Sites 16A and 16B, is the probable source of most of the carcinogenic PAH in soils described in this report. The reason for the spatially intermittent pattern of the runoff of PAH-laden material from the pavement is not known.</p> <p>Additionally, please clarify why Figure 3-1 shows analytical results from 55 samples, while a total 62 samples are mentioned elsewhere in the report.</p>	<p>Comment Noted.</p> <p>Figure 3-1 presents the B[a]P equivalent concentrations of 56 soil samples collected. One sample was collected at the same depth as the original sample therefore, the highest concentration of the two was presented in the figure. The B[a]P equivalent concentrations of the remaining five samples are below the EPA Region IX Residential PRG of 62 µg/kg and are not presented in the figure. However, the figure shows the B[a]P equivalent concentrations below the PRG value at locations that define the vertical extent of the PAHs.</p> <p>The results of all 62 samples will be shown on Figure 3-1.</p>

Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: John P. Christopher, Ph.D., D.A.B.T., Staff Toxicologist, Human and Ecological Risk Division. Dated: 5 February 2003

Comment No./Reviewer	Section/ Page No.	Comment	Response
2.	PAH at Sites ST-16A and 16B, Section 3.5, Page 3-2	Concentrations of BAPeq greater than 1,000 µg/kg were seen in one sample at Site 16A (ST-16A-SW-03, 6 inches) and one at Site 16B (ST-16A-34, surface). Other samples collected within the confines on the two sites range from 0-607 µg/kg BAPeq. Concentrations of BAPeq > 1,000 µg/kg might not be compatible with unrestricted future use of these parcels.	Comment Noted. Please see response to Conclusions and Recommendations Comment #2.
3.	Risk Characterization, Table 4-1, page 4-3	The navy estimated total risk for the two sites and the edge of the pavement using all 62 samples. Including naturally occurring arsenic as a chemical of potential concern, the Navy estimates residential cancer risk at about 5 E-5. Arsenic contributes about half of this risk, with BAPeq contributing nearly all the other half. For the industrial worker, the cancer risk estimate, including arsenic, is about 8 E-6. The non-cancer hazard index is less than 1.0 for both exposure settings.	Comment Noted.

In Table 4-1, entries in the column labeled "%Contribution to Risk" are correct when arsenic is included, but should be re-normalized when arsenic is excluded. The percent contributions should read as follows: Benzo(a)pyrene – 60%; Benzo(b)fluoranthene – 12%; dibenz(a,h)anthracene – 14%; and Indeno(1,2,3-cd)pyrene – 10%. The entries in this table given as "Dibenz(a,h)fluoranthene" is a misnomer in this table; the word should be "dibenz(a,h)anthracene", as given in the analytical results in Appendix B.

CONCLUSIONS AND RECOMMENDATIONS

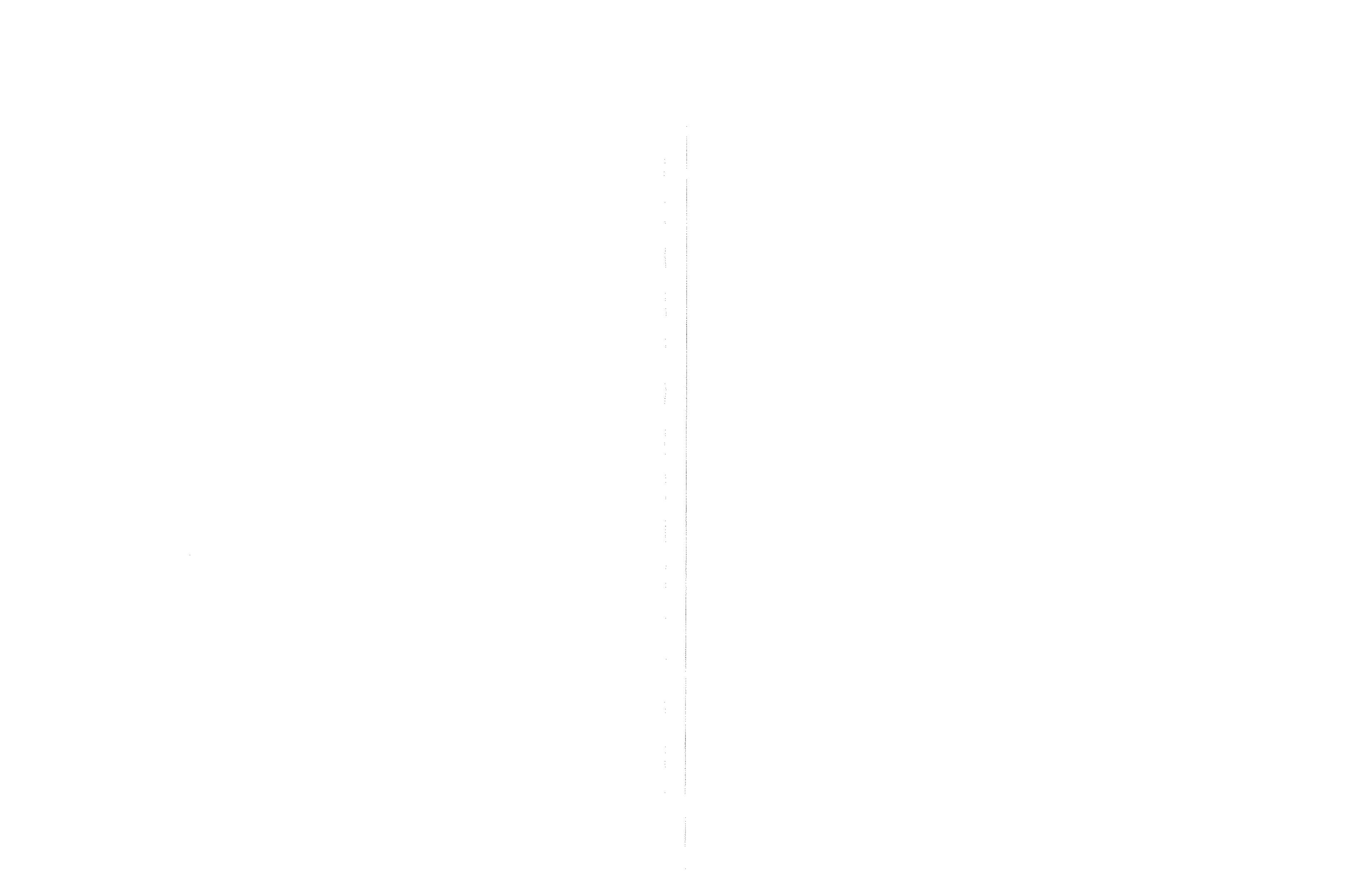
1.	We concur with the Navy that the principal source of the PAHs detected in this portion of the base were released via runoff from the paved area, rather than from Sites ST-16A and ST-16B.	Comment Noted.
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Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: John P. Christopher, Ph.D., D.A.B.T., Staff Toxicologist, Human and Ecological Risk Division. Date: 5 February 2003

Comment No./Reviewer	Section/ Page No.	Comment	Response
2.		<p>We accept the Navy's estimates of risk and non-cancer hazard for potential future residents and workers. Cancer risks for these potential future receptors exceed the point of departure of 1 E-6 but are less than the action level of 1 E-4. Concentrations of BAPeq > 1,000 µg/kg might not be compatible with unrestricted future use of these parcels.</p> <p>This new site called the Building 186 Motor Pool Area will be managed under the Petroleum Corrective Action Program (PCAP). After inclusion into the PCAP program, a work plan will be prepared addressing the soil removal at the eight locations with elevated PAH concentrations, at a minimum. The clean up goal for the soil removal will be 900 µg/kg.</p> <p>Additionally, the Navy proposes that the carve-out property associated with the storage areas ST 16A/B will not be transferred until clean up effort at the new site is complete.</p>	<p>Comment Noted.</p> <p>Since the USEPA and DTSC concurred on the Draft Site Inspection Report conclusion that the source of elevated PAHs in soil may be attributable to run off from the asphalt paved area and not the two storage areas, the Navy proposes the creation of a new site for PAH contamination that runs along the asphalt pavement area.</p>



Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Anantaraman (Ram) Peddada, Remedial Project Manager, Base Closure and Reuse Unit, Office of Military Facilities. Dated: 31 January 2003

Comment No./	Section/ Page No.	Comment	Response
GENERAL COMMENTS			
1.		Overall, the draft document is well written and comprehensive. And while DTSC generally concurs with the DON's assessment for the risk estimates, DTSC reserves concern relative to whether or not the estimates support a finding of NFA site closure (See Specific Comments).	Comment Noted. Please see response to specific comment #15.
2.		Some of the references cited in the text are not referenced in the reference section and vice versa.	Comment Noted and Section 6.0: Reference, will be revised to include all the references cited in the text and all references that are not cited in the text but are included in this section will be removed.
3.		Initial soil removal: To what depth the soil was removed? And how many tons of soil was removed and how it was disposed off?	Approximately 22 tons of soil to depths of 0.5 to 1.0 feet bgs was removed as part of the initial soil removal of 1996.
SPECIFIC COMMENTS			
1.	Page i, Under Executive Summary: paragraph 3, line 3	Add " 6 were" before "analyzed for total petroleum hydrocarbons."	Sentence will be revised as suggested.

Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Anantaramam (Ram) Pendada, Remedial Project Manager, Base Closure and Reuse Unit, Office of Military Facilities. Dated: 31 January 2003

Comment No./	Section/ Page No.	Comment	Response
2.	Page i, Under Executive Summary: paragraph 3, lines 2-3	"8 soil samples..." were any of the samples collected at ST-16B? If not, why not?	No samples were collected at ST-16B during the Initial Site Investigation of 1996 since this area was not considered to be of concern. However, during confirmatory sampling at ST-16A, elevated PAH concentrations were detected in sidewall samples, suggesting that the PAH contamination appeared to extend away from ST-16A. In order to delineate the lateral extent of the PAH contamination that appeared to extended away from ST-16A, additional soil sampling was conducted at locations including few at ST-16B.
		The text will be modified to reflect the sequence of activities at ST-16A and ST16B.	
3.	Page i, Under Executive Summary: paragraph 3, line 6	Provide in how many samples PAHs were detected above TCLs and also mention what is the target clean up levels.	A review of the available analytical data does not show any exceedance of TCLs during the initial sampling. This text will be deleted.
4.	Page i, Under Executive Summary: paragraph 6, line 3	No removal action was conducted at ST 16B	Comment Noted.
5.	Page 1-1, Under Introduction: paragraph 3, line 4	Regional Water Quality Control Board is also a part of CAL-EPA. Please revise the sentence.	The text will be modified to state that the removal action was conducted only at ST-16A.
6.	Page 1-1, Under Introduction: paragraph 3, line 5	Delete "and SWDIV"	Sentence will be revised as suggested.
		Non-concur, DON is part of the BCT.	

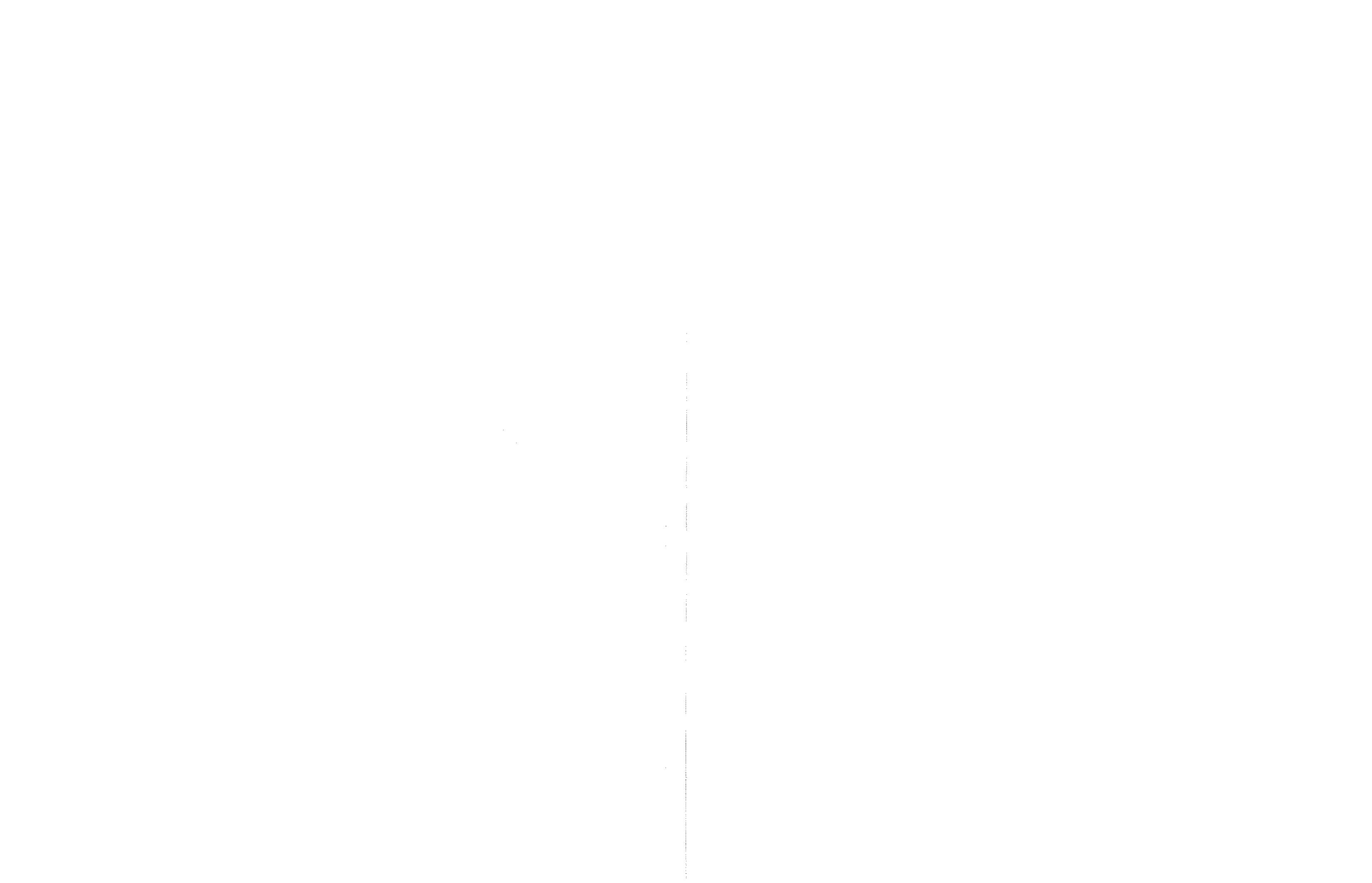


Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Anantaraman (Ram) Peddada, Remedial Project Manager, Base Closure and Reuse Unit, Office of Military Facilities. Dated: 31 January 2003

Comment No./	Section/ Page No.	Comment	Response
7.	Page 1-1, Under Introduction: paragraph 4, lines 1and 2	Please update these sentences with respect to the recent transfer of property to the City of Tustin.	The sentence will be updated to reflect the recent transfer of the property to City of Tustin.
8.	Page 1-1, Section 1.2	We suggest deleting "Project Description" from the heading.	Heading will be revised as suggested.
9.	Page 2-1, Under Physical Setting and Background: paragraph 2, line 1	Was 16B investigated?	Please see response to Specific Comments #2 and #4.
10.	Page 2-1, Under Geology: Paragraph 1, line 9	The reference cited "USDA 1978" in the text is missing in the reference section.	This reference will be added to the Reference Section.
11.	Page 2-2, Under Surrounding Land Use and Populations: Paragraph 1, lines 5-6	Please verify the current reuse plan for this site.	The current reuse plan for the MCAS Tustin will be verified and the report will be updated accordingly.
12.	Page 3-1, Under Initial Site Investigation of 1996: Paragraph 1, line 3-4	Please explain why only 6 samples were analyzed and no samples were collected at ST 16B.	Please see response to Specific Comment # 2.
13.	Page 3-1, Under Initial Site Investigation of 1996: Paragraph 1, line 6	The reference cited "1996 EPA" in the text is missing in the reference section.	This reference will be added to the Reference Section.
14.	Page 3-1, Under Initial Site Investigation of 1996: Paragraph 1, line 7	Provide a table showing PRGs of PAHs, and where they were detected above the target cleanup levels.	A review of the available analytical data does not show any exceedance of TCUs during the initial sampling. This text will be deleted.

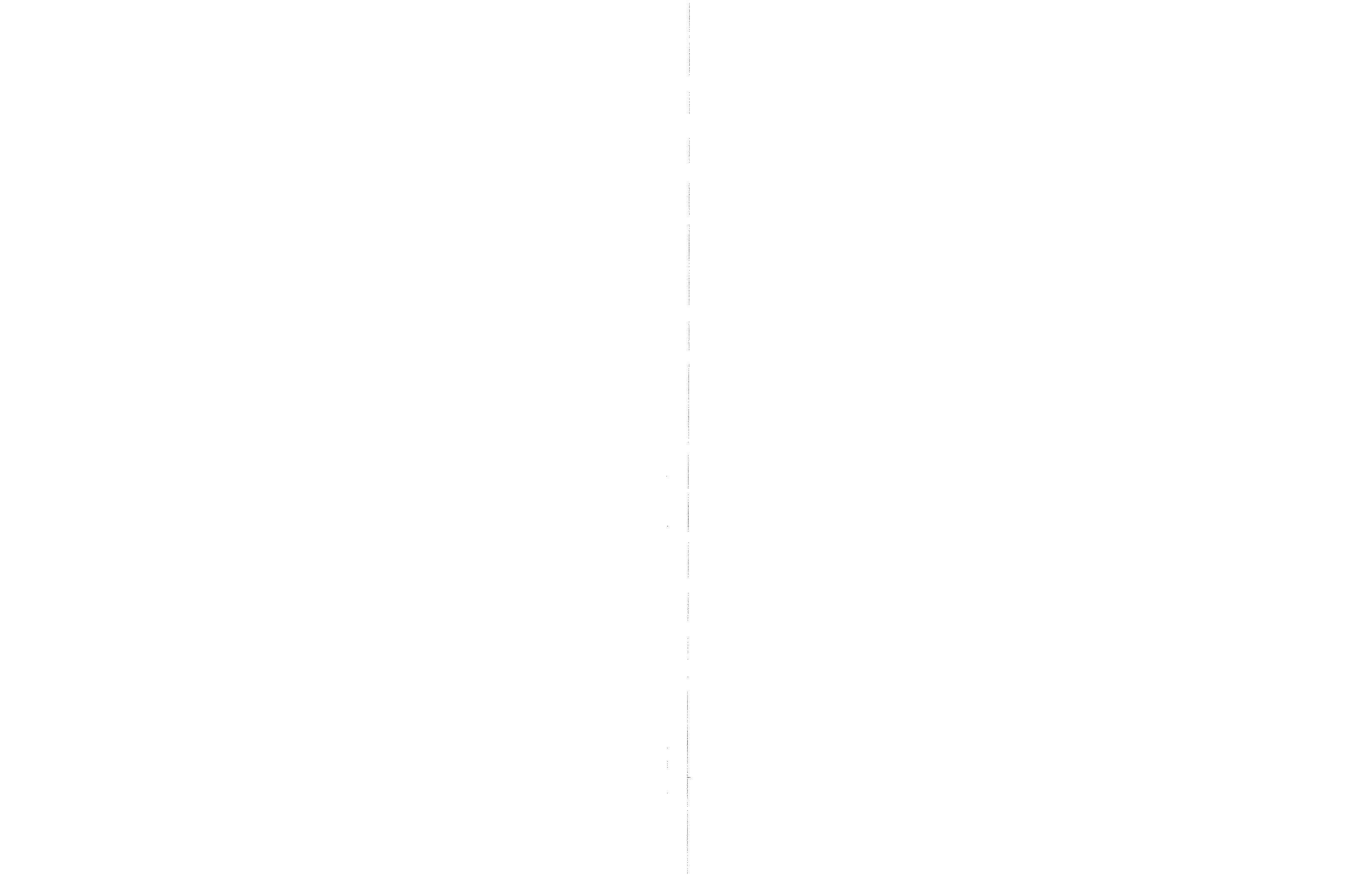


Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Anantaramam (Ram) Peddada, Remedial Project Manager, Base Closure and Reuse Unit, Office of Military Facilities. Dated: 31 January 2003

Comment No./	Section/ Page No.	Comment	Response
15.	Page 3-1, Under Additional Soil Sampling of April/May 2000: Paragraph 1, lines 8-9	<p>The Navy asserts that the source of elevated concentrations of PAH in soil was apparently runoff from the paved area which runs past both ST-16A and ST-16B. We note in Figure 3-1 that a total of eight of the 55 soil samples shown in Figure 3-1 have concentrations of benzo(a)pyrene equivalents (BAPeq) greater than 1,000 µg/kg. Six of these eight were collected at the edge of the paved area. The six samples mentioned are scattered along the entire length of the paved area shown in Figure 3-1. Therefore, we agree with the Navy that the paved area, not sites 16A and 16B, is the probable source of most of the carcinogenic PAH in soils described in this report. The reason for the spatially intermittent pattern of the runoff of PAH-laden material is not known.</p> <p>DTSC does not agree leaving in place concentrations of benzo(a)pyrene equivalents [Ba(P)] in excess of 1,000 µg/kg. In previous instances DON removed "hotspots" areas (i.e., benzo(a)pyrene equivalents [Ba(a)P] in excess of 1,000 µg/kg).</p>	<p>Comment Noted.</p> <p>Since the USEPA and DTSC concurred on the Draft Site Inspection Report conclusion that the source of elevated PAHs in soil may be attributable to run off from the asphalt paved area and not the two storage areas, the Navy proposes the creation of a new site for PAH contamination that runs along the asphalt pavement area.</p> <p>This new site called the Building 186 Motor Pool Area will be managed under the Petroleum Corrective Action Program (PCAP). After inclusion into the PCAP program, a work plan will be prepared addressing the soil removal at the eight locations with elevated PAH concentrations, at a minimum.</p> <p>The clean-up goal for the soil removal will be 900 µg/kg. Please see response to Specific Comment #8 on Draft Final Site Inspection Report.</p>
16.	Page 3-2, Under Site Characterization: Paragraph 1, line 1	"Soil samples collected during initial investigation of 1996 have been excluded". Please provide a table with the original 6 samples with their results for completeness and comparison.	<p>Additionally, the Navy proposes that the carve-out property associated with the storage areas ST 16A/B will not be transferred until clean up effort at the new site is complete.</p> <p>Table A-2 (pages 1 through 4) of Appendix A presents the analytical results of the soil samples collected during Initial Investigation of 1996.</p>
17.	Page 3-3, Figure 3-1	Even though 14 conformity samples were taken; only 11 sites show on Figure 3-2. Please add the missing sample locations to the figure. Also provide the original 1996 sample locations and the results to this figure.	All the 14 confirmatory sampling locations are shown on Figure 3-1.
18.	Page 4-5, Under Risk Management Considerations: 4 th bullet	Please verify the current reuse plan for this site.	<p>The original 1996 sample locations and the results will also be presented in Figure 3-1.</p> <p>The current reuse plan for the MCAS Tustin will be verified and the report will be updated accordingly.</p>



Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Anantaramam (Ram) Peddada, Remedial Project Manager, Base Closure and Reuse Unit, Office of Military Facilities. Dated: 31 January 2003

Comment No./	Section/ Page No.	Comment	Response
19.	Page 6-1, Under References:	To make it easy for this comment number the reference as 1,2...20. The following references are not referenced in the text: 4, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, and 20.	Comment Noted and Section 6.0: Reference, will be revised to include all the references cited in the text and all references that are not cited in the text but are included in this section will be removed.
20.	Page 1 of 6, Table A-1:	Please change the heading to "Analytical Results for Confirmatory samples". Please explain the qualifiers, RDL and MDL at the end of the table.	Table A-1 will be revised to reflect the changes suggested.
21.	Table A-2:	Provide the reason why the sample Numbers 17306-738 and 17306-736 have no values. In addition a total 54 samples were collected according to table A-3, however only 50 sample results were presented in the table A-2. Please explain.	Samples 17306-738 and 17306-736 were analyzed only for VOCs (EPA Method 8260A). Table A-1 and A-2 presents summary of analytical results pertaining to PAH compounds. Therefore, samples 17306-738 and 17306-736 had no values.
22.	Table A-2:	Please add RDL, MDL, Units and Result Qlfr to the table.	Table B-1 will be updated accordingly.
23.	Table A-3:	Please provide Total B(a)P Equivalents for the first six samples which were shown as zeros.	Table will be revised to reflect the changes suggested.
24.	Appendix B, Table B-1, page 2.	Please fix this page.	Total B(a)P equivalents for the first six samples will be provided in Table A-3.
			Second page of Table B-1 will be fixed.

Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: James A. Rick Jr. Project Manager, United States Environmental Protection Agency, Region IX. Dated: 31 January 2003

Comment No./	Section/ Page No.	Comment	Response
GENERAL COMMENTS			
1.		<p>Overall, the EPA finds that the subject draft document is well written and comprehensive. And while the Agency generally concurs with the DON's assessment for the risks estimates, EPA reserves concern relative to whether or not the estimates support a finding of NFA site closure (See Specific comments)</p> <p>This new site called the Building 186 Motor Pool Area will be managed under the Petroleum Corrective Action Program (PCAP). After inclusion into the PCAP program, a work plan will be prepared addressing the soil removal at the eight locations with elevated PAH concentrations, at a minimum. The clean up goal for the soil removal will be 900 µg/kg.</p> <p>Additionally, the Navy proposes that the carve-out property associated with the storage areas ST 16A/B will not be transferred until clean up effort at the new site is complete.</p>	<p>Comment Noted.</p> <p>Since the USEPA and DTSC concurred on the Draft Site Inspection Report conclusion that the source of elevated PAHs in soil may be attributable to run off from the asphalt paved area and not the two storage areas, the Navy proposes the creation of a new site for PAH contamination that runs along the asphalt pavement area.</p>

Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: James A. Rick Jr. Project Manager, United States Environmental Protection Agency, Region IX. Dated: 31 January 2003

Comment No./	Section/ Page No.	Comment	Response
SPECIFIC COMMENTS			
1.	Figure 3-1 "Previous Sampling Locations and results - ST - 16A/B."	<p>The figure depicts eight (8) sampling locations in which the results indicate concentrations of benzo(a)pyrene equivalents [B(a)P] in excess of 1000 ug/kg that are dispersed along the paved areas. While EPA, in principle, believes it not unreasonable to attribute the probable source of the PAH in soils from the paved area, the Agency can not concur that a NFA site closure is appropriate for this site. These high concentrations adversely impact the site and constitute wastes left in place with levels that are too elevated to support NFA. EPA notes that in previous environmental circumstances in which benzo(a)pyrene equivalents [B(a)P] was detected in excess of 1000 ug/kg, the DON conducted remediation efforts to mitigate the risks posed from the elevated levels of contamination. As the lead Federal Agency, the EPA expects that the DON would undertake appropriate measures consistent with its responsibilities and obligations under CERCLA to address the elevated concentration of detected in soil at ST 16A/B.</p>	<p>Please see General Comment #1.</p>

Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Dana Ogdon, Program Manager, City of Tustin. Dated: December 4, 2003

Comment No./Reviewer	Section/ Page No.	Section/ Page No.	Comment	Response
GENERAL COMMENTS				
1.	General	The document's conclusions and risk management decisions are not supportable due to the Navy's incorrect assessment of the future reuse planned for the ST-16A and 16B site. Section 2.3 on page 2-2 indicates that the "reuse plan indicates the property at ST 16A/B will be reused as commercial/business complex". Since its approval in October 1996, the approved Reuse Plan for MCAS Tustin has identified the site and surrounding property as planned for a "Community Core" land use. The Community Core land use regulations permit a mixture of uses to occur at the site including commercial, light, industrial, office, and residential uses. In fact, the Reuse Plan permits nearly 1,000 residential units to be constructed anywhere within the entire Community Core land use designation footprint. The City's review of the risk conclusions reached in the document would indicate that certain military contamination cancer risks have been identified that may exceed an acceptable residential risk. Navy remediation activities must be supportive of the approved community Reuse Plan. Please confirm that the recommended No Further Action for ST-16A/B does not include any restrictions to potential residential use of the site. The City of Tustin requests that the Navy perform all remediation needed to ensure that the ST16A/B property can be reused as currently planned.	The screening risk evaluation presented in the report provide the lower and upper risk estimates for the site. The exposure point concentrations of analytes were compared to the residential PRGs to provide an upper estimate and to the industrial PRGs to provide a lower estimate of human health risks. However, it is Navy's intention to make risk management decisions based on unrestricted reuse, which is in line with the City of Tustin Reuse Plan. Also, please note following extensive discussions with regulatory agencies, a new site under the petroleum corrective action program (PCAP) will be created to address the elevated PAHs. This removal action will achieve clean up that is consistent with residential reuse.	

SPECIFIC COMMENTS

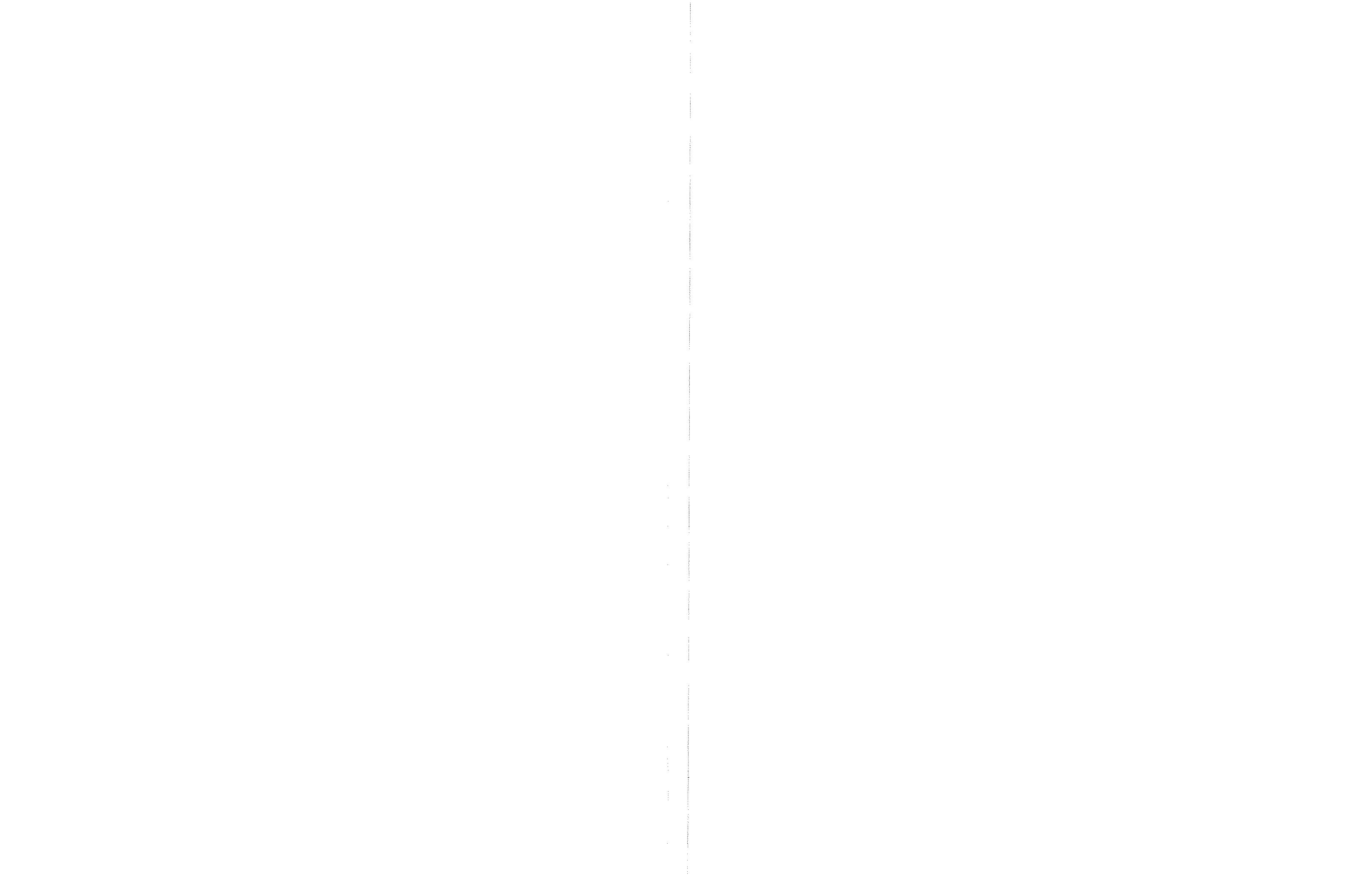
1.	Page 4-1, Section 4	The section states that the ST-16A/B preliminary remediation goals (PRGs) were established as "industrial" as "the most probable reuse scenario." Please see comment #1, above and revise accordingly.	Please see response to General Comment #1.
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Document Title:

(1) Draft Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Dana Ogdon, Program Manager, City of Tustin. Dated: December 4, 2003

Comment No./Reviewer	Section/ Page No.	Comment	Response
2.	Page 4-5, Section 4.5	The section states "the projected reuse of this area (is) for commercial/business purposes." Please see comment #1, above, and revise accordingly.	Comment Noted. Also, please see response to General Comment #1.
3.	Page 5-1, Section 5	<p>The section identifies "a target risk range of 10^{-4} to 10^{-6} as "generally used to establish health protection goals as part of site cleanup." The section also states "risks that fall within the range...are considered to be within the risk management range." Please identify the source of both of these statements.</p> <p>Has Cal EPA concurred with this "generally used" health protection goal and the "within risk management range" conclusion as referenced in this section?</p> <p>How was this goal established for MCAS Tustin, in light of the planned mixed use (including permitted residential uses anywhere within the land use designation) reuse of the property?</p>	<p>The following guidance documents are the source of the health protection goals and the risk management range specified in the report.</p> <ul style="list-style-type: none"> • Risk Assessment Guidance for Superfund (RAGS), Volume 1, Human Health Evaluation Manual (Parts A and B) (EPA 1989, 1991a) • Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual Supplemental Guidance, Standard Default Exposure Factors (EPA 1991b) • Protocol to Conduct Human Health and Ecological Risk Assessments for the U.S. Department of the Navy, Pacific Division <p>Cal-EPA has concurred with the use of these risk management ranges in evaluating whether sites require further action.</p> <p>Please see response to General Comment #1.</p>





DEPARTMENT OF THE NAVY
SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CA 92102 - 5100

5090
Ser 06CC.KO/0800
May 16, 2003

Mr. Ananataramam (Ram) Peddada
California Department of Toxic Substances Control
Office of Military Facilities
5796 Corporate Avenue
Cypress, CA 90630

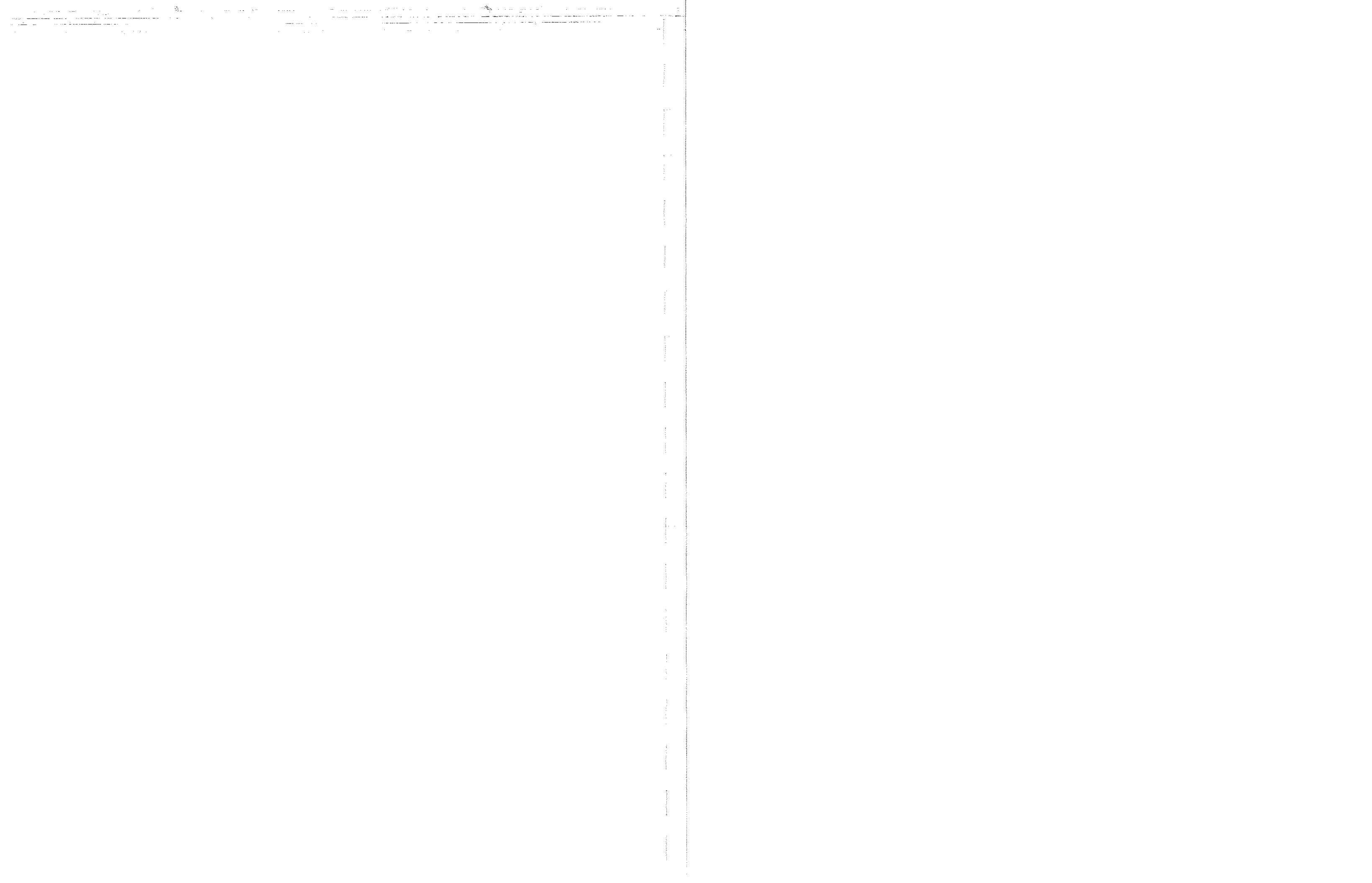
Mr. James Ricks
U.S. Environmental Protection Agency
Superfund (SFD 8-1)
Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Mr. John Broderick
California Regional Water Quality Control Board
California Tower
3737 Main Street, Suite 500
Riverside, CA 92501-3339

Dear Fellow BRAC Cleanup Team (BCT) Members:

This is in regard to Temporary Storage Areas 16 A/B (ST-16 A/B) at the former Marine Corps Air Station (MCAS) Tustin, California. At the April 16, 2003 BCT meeting, we discussed an alternative closure strategy to address remaining soil contamination in the area of ST-16 A/B. This letter provides a summary of that strategy.

The recent history for this site is as follows. The Navy submitted the Draft Site Inspection (SI) Report for ST-16 A/B in November 2002 recommending that ST-16 A/B be closed as No Further Action (NFA) sites. Cleanup activities had been conducted in recent years, and the only remaining contaminant of concern is limited to polynuclear aromatic hydrocarbons (PAHs) in near-surface soils. The NFA recommendation was based on the fact that PAH contamination in nearby soils is not associated with storage activities at ST-16 A/B but rather from the adjacent asphalt pavement area. Both DTSC and EPA did not concur with the NFA recommendation due to residual soil concentrations of PAHs expressed as Benzo(a)pyrene equivalents greater than 1,000 ug/kg. Although EPA and DTSC accepted the Navy's estimates of cancer risk and non-cancer hazard as being within the risk management range, DTSC and EPA believed these concentrations were not compatible with unrestricted future use.



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Ser 06CC.KO/0800
May 16, 2003

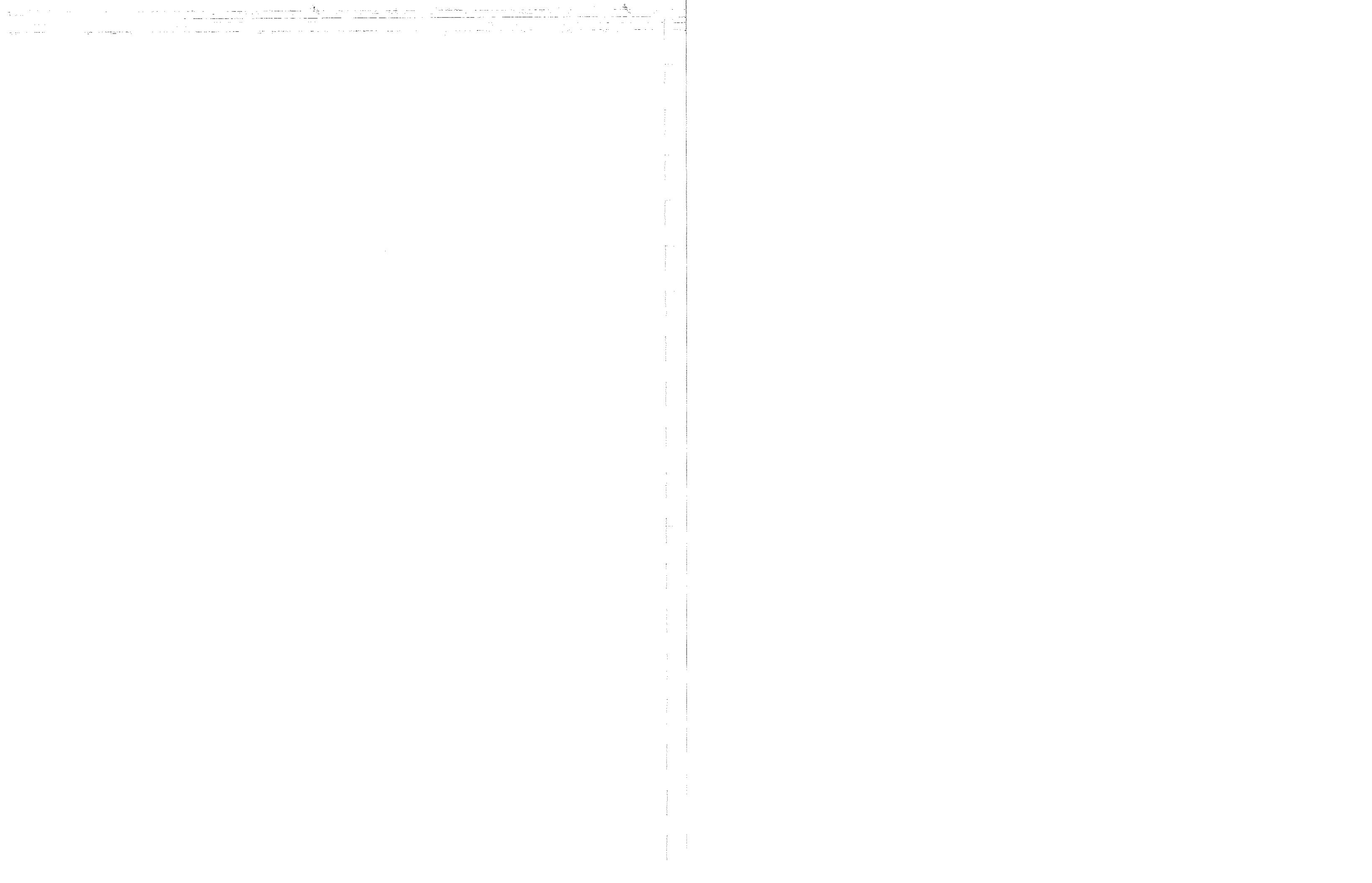
Per our discussions at the April BCT meeting, the Navy proposes a two-step closure approach: 1) The Navy will again propose NFA closure of ST-16 A/B separately from the PAHs, and 2) The Navy will conduct the PAH cleanup as soon as practical through a petroleum corrective action.

Specifically, the Navy will submit the Draft Final SI Report for ST-16 A/B recommending NFA. In the Draft Final SI Report, the Navy will include data and justification to apply the petroleum exclusion clause to the PAH contamination. Since the PAH contamination did not come from storage activities, the closure of ST-16 A/B will provide finality for the storage areas and allow the Navy to conduct a separate PAH cleanup.

Concurrent with the Draft Final SI Report, the Navy proposes to create a new site for the PAH contamination that runs along the nearby asphalt pavement area. This new site is called the Building 186 Motor Pool Area (B-186 MPA). Since the PAH contamination along the paved area is a result of runoff that contained asphalt, petroleum byproducts from vehicles or petroleum exhaust from vehicles or aircraft, this site is recommended to be managed under the Petroleum Corrective Action Program (PCAP). As the lead regulatory agency for the PCAP, the RWQCB agreed that B-186 MPA could be closed through that program. The Navy will submit a PCAP workplan illustrating the horizontal and vertical extent of PAH contamination that needs to be removed. At a minimum, soil removal will include the locations of the eight samples previously collected that had PAH concentrations above 1000 ug/kg. These include samples:

1. ST-16A-22
2. ST-16A-23
3. ST-16A-SW-03
4. ST-16A-SB-25
5. ST-16A-SB-26
6. ST-16A-SB-27
7. ST-16A-SB-29
8. ST-16A-34

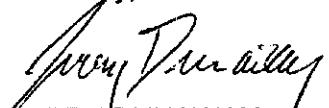
After contaminated soil has been removed, confirmation sampling will be conducted at each of these eight locations to ensure PAH concentrations have been reduced to below 900 ug/kg. Based on the previously accepted risk calculations, the BCT agreed that no additional risk assessment is necessary once the 900 ug/kg remedial goal is attained.



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Ser 06CC.KO/0800
May 16, 2003

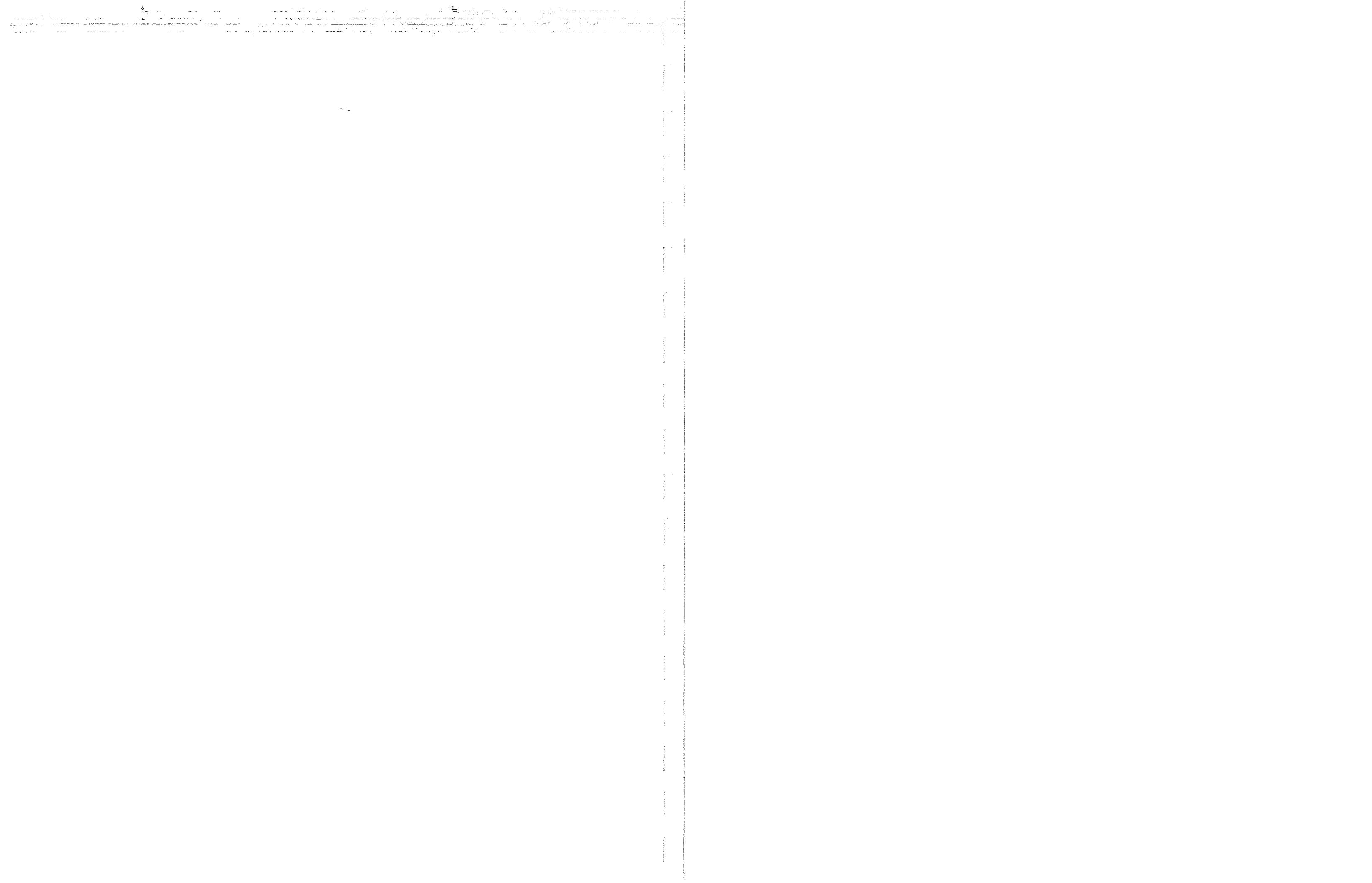
We truly appreciate your willingness to pursue alternative remedial strategies for sites at MCAS Tustin. We believe that for ST-16 A/B, this approach separates the PAH contamination at the B-186 MPA from ST-16 A/B to avoid an inappropriate association between the two sites. At the same time, the Navy can perform a more appropriate and equally protective cleanup at B-186 MPA through the PCAP. If you have any questions about this strategy, please contact Ms. Kyle Olewnik at (619) 532-0789, or me at (619) 532-0975.

Sincerely,



JERRY DUNAWAY
BRAC Environmental Coordinator
By direction of the Commander

Copy to:
Mr. Dana Ogdon
City of Tustin
300 Centennial Way
Tustin, CA 92680



Document Title:

(1) Draft Final Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Anantaramam (Ram) Peddada, Remedial Project Manager, Base Closure and Reuse Unit, Office of Military Facilities. Dated: 1 August 2003

Comment No./	Section/ Page No.	Comment	Response
GENERAL COMMENTS			
1.		Even though Navy's responses to our comments mention some revisions to the text were made, in fact these revisions are not found.	Subsequent to issuing the responses to comments on the draft SI, some sections of the report text were modified or deleted to enhance clarity. Responses to comments on the "omitted" revisions are presented in the specific comments section below.
2.		New tables were added to this version of the document and it is very confusing to correlate our comments.	New tables were added to the Appendix A of the Draft Final version to present the analytical soil sampling results in chronological order, in lieu of sampling results of the Excavation soil samples and Soil Boring Soil Samples.
SPECIFIC COMMENTS			
1.	Page 1, Under Executive Summary, paragraph 4, line 3	Please show how the soil was disposed off?	Text will be added to state that the soil was treated using the thermal desorption system stationed at MCAS Tustin.



Document Title:

(1) Draft Final Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Anantaramam (Ram) Peddada, Remedial Project Manager, Base Closure and Reuse Unit, Office of Military Facilities. Dated: 1 August 2003

Comment No./	Comment Section/ Page No.	Comment	Response
2.	Page ii, Under Executive Summary: last paragraph, lines 8-10	"The clean...equivalents". Replace with "DTSC and USEPA confirmed that the Navy will apply 900 µg/kg as a "performance standard", meaning no confirmation sample can exceed 900 µg/kg benzo(a)pyrene equivalents (BAPeq)."	The sentence will be revised to indicate 900 µg/kg will be a maximum value.
3.	Page 2-2, Section 2.3, paragraph 1, line 3	"October 1996" reference not cited in the reference section.	The reference will be added to the Reference Section of the report.
4.	Page 5-1, section 5, paragraph 3, lines 8-9	Replace "The clean...equivalents" with "DTSC and USEPA confirmed that the Navy will apply 900 µg/kg as a "performance standard", meaning no confirmation sample can exceed 900 µg/kg benzo(a)pyrene equivalents (BAPeq)."	The sentence will be revised to indicate 900 µg/kg will be a maximum value.
5.	Response to our Comment #4	"The text will be modified to state that the removal action was conducted only at ST 16A" is not in the text.	<p>Page 1, Executive Summary: paragraph 6, pertains to the data set that was used to estimate the total human health risk due to PAH concentrations at the site ST 16A/B as a whole (includes both storage areas ST16A and ST 16B).</p> <p>Since Paragraph 4 of the Executive Summary indicates that initial soil removal action was conducted at ST 16A and that paragraph 6 discusses data sets for risk assessment, the response to DTSC comments on Draft version was revised.</p> <p>The reference to removal action of April 1997 was deleted from this paragraph 6 in the Draft Final SI document.</p>
6.	Response to our comment #15, paragraph 2	Change " The cleanup goal for the soil removal will be 900 µg/kg" to Navy will apply 900 µg/kg as a "performance standard", meaning no confirmation sample can exceed 900 µg/kg benzo(a)pyrene equivalents (BAPeq)."	The sentence will be revised to indicate 900 µg/kg will be a maximum value.

Document Title:

(1) Draft Final Site Inspection Report, Former Storage Areas ST-16A and 16B, MCAS Tustin

Reviewers: Anantaramam (Ram) Peddada, Remedial Project Manager, Base Closure and Reuse Unit, Office of Military Facilities. Dated: 1 August 2003

Comment No./	Section/ Page No.	Comment	Response
7.	Table A-1	Table A-1 presented in the Draft Final Site Inspection Report is not the same one presented in the Draft Site Inspection Report. Please explain the discrepancy. Our comment #20 is not addressed.	Please see response to General Comment #2. DTSC Specific Comment #20. Page 1 of 6, Table A-1: Please change the heading to "Analytical Results for Confirmatory samples". Please see explanation in response to General Comment #2.
8.	Response to our comment #23	"Total B(a)P equivalents for the first six samples will be provided in Table A-3". These are not provided in the table.	<i>Please explain the qualifiers, RDL and MDL at the end of the table. These are presented at the foot of the table.</i> A new table was introduced in Appendix A called <u>Table A-1 (contd)</u> : Analytical Results of Initial Soil Investigations of 1996 that presents the B(a)P Equivalent concentrations for these soil samples.

